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FIFTEENTH ANNUAL REPORT
OF THE
STATE BOARD OF INSANITY

—
1913

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FIFTEENTH ANNUAL REPORT

OF THE

STATE BOARD OF INSANITY

OF

The Commonwealth of Massachusetts

FOR THE

YEAR ENDING NOVEMBER 30, 1913.



BOSTON:

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1914.

APPROVED BY
THE STATE BOARD OF PUBLICATION.

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MEMBERS OF THE STATE BOARD OF INSANITY.

Nov. 30, 1913.

MICHAEL J. O'MEARA, M.D., <i>Chairman</i> ,	WORCESTER.
WILLIAM F. WHITTEMORE,	BOSTON.
JOHN WHITING MASON,	NORTHAMPTON.
L. VERNON BRIGGS, M.D.,	BOSTON.
JAMES M. W. HALL,	NEWTON CENTER.

OFFICERS.

CHAS. E. THOMPSON, M.D.

Secretary and Executive Officer.

LOWELL F. WENTWORTH, M.D.

Deputy Executive Officer.

ELMER E. SOUTHARD, M.D.,

Pathologist.

DANIEL H. FULLER, M.D.,

Assistant to Executive Officer.

NELLIE F. BALL, *First Clerk.*

CLARA L. FITCH, *Stenographer.*

FLORENCE H. MCINTIRE, *Stenographer.*

M. LOUISE SMALL, *Clerk.*

EDA W. FITCH, *Clerk.*

REBECCA F. WARSHAW, *Clerk.*

ELMER R. LIBBY, *Financial Agent.*

REBECCA J. GREENE, *Accountant.*

BESSIE M. FIELD, *Stenographer.*

EDITH A. STEVENS, *Clerk.*

JOHN I. ROBINSON, *Clerk.*

FRANCIS B. GARDNER, *Support Agent.*

BENJAMIN F. WARD, *Visitor.*

FREDERICK R. HOUGHTON, *Visitor.*

PAUL A. GREEN, *Visitor.*

MAUDE F. FREETHY, *Stenographer.*

MARY L. BALLOU, *Clerk.*

WILLIAM T. HANSON, M.D.

Medical Director of Family Care of Harmless Insane.

MABEL G. GRAGG, *Visitor.*

GERNA SAVILLE, *Visitor.*

FRED F. FLANDERS, Ph.D., *Chemist.*

Department of Standards.

EMILY L. HAINES, *Supervisor of Industries.*

Transportation Agents.

FRED A. HEWEY.

ELLA HEAL.

TRUEMAN G. MORISON,

Laboratory Assistant and Messenger.

The Commonwealth of Massachusetts.

REPORT OF THE STATE BOARD OF INSANITY.

THE DUTIES OF THE BOARD.

The Board has supervision of the institutions, public and private, for the insane, feeble-minded, epileptic, inebriates and drug habitués. It has the right of investigation and recommendation as to any matter relating thereto, but the local administration of each State institution is under the control of its own board of trustees, appointed by the Governor and Council.

The direct powers of the Board concern the interrelations of institutions and matters which are common to them all, such as the distribution and transfer of patients between them, deportation of patients to other States and countries, claims to support as State charges in institutions, etc. The Board is required to review and express its opinion of all estimates for appropriations, both those for maintenance and special purposes, such as new buildings and improvements, and to approve the final plans and specifications for new buildings before their erection.

The Board has the power to investigate the question of sanity and condition of any person restrained of his liberty by reason of alleged insanity, and to discharge any such person if, in its opinion, he is not insane, or can be cared for after such discharge without danger to others and with benefit to himself. It acts often as a board of appeal in the adjustment of differences and complaints.

The statutes relative to the establishment, duties and powers of the State Board of Insanity are to be found in chapter 504, sections 2 to 13, of the Acts of 1909.

REVIEW OF THE YEAR.

ALL CLASSES UNDER CARE.

The number and location of these classes Oct. 1, 1913, were: —

LOCATION.	Insane.	Feeble-minded.	Epileptic (Sane.)	Voluntary (Sane.)	Inebriate.	Temporary Care.	Total.	Other Classes.
Worcester State Hospital,	1,320	—	—	—	8	2	1,330	—
Taunton State Hospital,	1,133	—	—	1	6	4	1,143	—
Northampton State Hospital,	906	—	—	1	1	—	909	—
Danvers State Hospital,	1,440	—	—	1	4	—	1,445	—
Westborough State Hospital,	1,227	—	—	9	28	3	1,267	—
Boston State Hospital,	1,288	—	—	5	—	24	1,317	—
Mental wards, State Infirmary,	710	144	—	—	—	—	854	—
Worcester State Asylum,	1,327	—	—	—	3	—	1,330	—
Medfield State Asylum,	1,697	—	—	—	—	—	1,697	—
Gardner State Colony,	681	—	—	—	—	—	681	—
Monson State Hospital,	345	—	577	—	—	—	922	—
Bridgewater State Hospital,	800	—	—	—	—	—	800	—
Foxborough State Hospital,	209	—	—	—	102	—	311	—
Family care,	336	—	—	—	—	—	336	—
Massachusetts School for the Feeble-minded at Waltham,	—	1,497	—	—	—	—	1,497	—
Wrentham State School,	—	423	—	—	—	—	423	—
McLean Hospital,	216	—	—	1	1	—	218	—
Twenty-four other private institutions,	131	1	—	17	6	1	156	50
Hospital Cottages for Children,	—	22	72	—	—	—	94	12
Elm Hill Private School and Home for the Feeble-minded,	—	55	—	—	—	—	55	—
Terrace Home School,	—	12	—	—	—	—	12	—
Almshouses,	—	252 ¹	—	—	—	—	252	—
Total under care,	13,766	2,406	649	34	159	35	17,049	62
Viz: —								
Public care,	13,419	2,338	649	16	152	34	16,608	12
Institutions,	13,083	2,086	649	16	152	34	16,020	12
Family care,	336	—	—	—	—	—	336	—
Almshouses,	—	252	—	—	—	—	252	—
Private care,	347	68	—	18	7	1	441	50
McLean Hospital,	216	—	—	1	1	—	218	—
Twenty-six private institutions,	131	68	—	17	6	1	223	50

¹ Figure taken from reports of overseers of the poor, March, 1913.

THE WHOLE NUMBER OF THESE CLASSES

under care Oct. 1, 1913, was 17,049, being 1 such person to every 210 of the estimated population of the State. Of this number, 13,766, or 81 per cent., were insane; 2,406, or 14 per cent., feeble-minded; 649, or 4 per cent., epileptic (sane); and 159, or 1 per cent., inebriates. Their increase for the year was 542. Of this number, 401, or 74 per cent., were insane;

177, or 33 per cent., feeble-minded, and 50, or 9 per cent., epileptic (sane).

The whole number of such persons under public care was 16,608; under private care, 441.

The whole number of such persons in public institutions was 16,020; their increase for the year, 513; their average annual increase for the last five years, 629.

THE INSANE

under care Oct. 1, 1913, numbered 13,766, being 1 insane person to every 260 of the estimated population of the State. In addition, there were 898 persons who were temporarily absent from institutions, and a considerable number of others in the community who had been previously discharged or had never appeared in institutions for the insane.

The insane appear under public care in public institutions and boarded out in family care, at public expense, and under private care in private institutions. Their number and increase in these locations for the year, the last five years, the last ten years and the last twenty-five years are shown as follows:—

	NUMBER OCT. 1, 1913.			INCREASE OVER PRE- VIOUS YEARS.					Average Increase, Five Years.	Average Increase, Ten Years.	Average Increase, Twenty-five Years.
	Males.	Females.	Totals.	1913.	1912.	1911.	1910.	1909.			
Public institutions, .	6,574	6,509	13,083	379	417	308	489	499	418.4	390.3	361.92
Family care, . .	12	324	336	20	18	23	34	31	18.4	17.7	10.24
Total, public, .	6,586	6,833	13,419	399	435	331	523	496	436.8	408.0	372.16
Private institutions, .	115	232	347	2	16	9	1 ¹	12	7.6	11.3	4.32
Total, public and private, . .	6,701	7,065	13,766	401	451	340	522	508	444.4	419.3	376.48

¹ Decrease.

THE INCREASE OF THE INSANE

under care for the year was 401, compared with 451 the previous year; 444, the average annual increase for the last five years; 419, the last ten years; and 376, the last twenty-five years.

The number of nonresident insane was 73, compared with 77 the previous year, and 72, the average number the last five years. Of these, 69 were patients in private institutions; and 4, private patients in State hospitals.

It is the policy of the State not to receive into its institutions nonresidents, even as private patients, unless their friends are resident in Massachusetts and have just claims for such service.

THE INCREASE OF THE INSANE UNDER PUBLIC CARE
was 399, compared with 435 the previous year; 436, the average annual increase for the last five years; 408, the last ten years; and 372, the last twenty-five years.

THE INCREASE OF THE INSANE UNDER PRIVATE CARE
was 2, compared with an increase of 16 the previous year; 7, the average annual increase for the last five years; 11, the last ten years; and 4, the last twenty-five years.

In addition to the insane, there were in private institutions for the insane 76 other patients, compared with 80 the previous year. Of these, 18 were sane voluntary mental patients, 50 voluntary nonmental patients, 7 inebriates, 1 temporary care and 1 feeble-minded. Four of these were in the McLean Hospital, where 25.33 per cent. of all patients were under the voluntary relation, without commitment as insane.

THE INCREASE OF THE INSANE IN FAMILY CARE
was 20, compared with an increase of 18 the previous year; 18, the average annual increase for the last five years; 17, the last ten years; and 10, the last twenty-five years.

THE INCREASE OF THE INSANE IN PUBLIC INSTITUTIONS
was 379, compared with 417 the previous year; 418, the average annual increase for the last five years; 390, the last ten years; and 362, the last twenty-five years.

ALL ADMISSIONS OF MENTAL PATIENTS

from the community to public institutions and McLean Hospital were 4,051, compared with 3,350 the previous year, and 3,411 the average the last five years. The increase this year was 701, compared with an increase of 143 the previous year, and 171, the average increase the last five years.

They comprise court commitments as insane, voluntary admissions of the insane and voluntary admissions of mental patients who were classed as sane.

Court commitments as insane were 3,493, compared with 3,093 the previous year, and 3,104, the average the last five years. The increase was 400, compared with an increase of 123 the previous year, and 98, the average increase the last five years.

Voluntary admissions of the insane were 487, compared with 254 the previous year. Public institutions received 416 such patients, of whom 129, or 31 per cent., required subsequent commitment. McLean Hospital received 71 such patients, of whom 7, or 9.85 per cent., required subsequent commitment.

Voluntary admissions of mental patients who were classed as sane were 149, compared with 28 the previous year. Public institutions received 146 such patients, and McLean Hospital, 3.

ALL VOLUNTARY ADMISSIONS

to public institutions and McLean Hospital were 636, compared with 282 the previous year, and 308, the average the last five years. The increase was 354, compared with an increase of 45 the previous year, and 88, the average increase the last five years. Public institutions received 562 such patients, compared with 211 the previous year, and 279, the average the last five years. McLean Hospital received 74 such patients, compared with 71 the previous year; and 76, the average the last five years.

EMERGENCY COMMITMENTS

numbered 24, an increase of 8, compared with a decrease of 33 the previous year. Public institutions received 23, 17 of whom were duly committed.

FIRST CASES OF INSANITY

appeared in public institutions and McLean Hospital to the number of 3,108, compared with 2,660 the previous year, and 2,673, the average the last five years. The increase was 448, compared with an increase of 95 the previous year, and 123, the average increase the last five years.

Of all the commitments of the insane to these institutions (inclusive of insane voluntary patients), 79.65 per cent. appeared for the first time in any institution for the insane.

One insane person came under care for the first time from every 1,152 of the estimated population of the State, compared with 1,318 the previous year, and 1,325, the average from 1905 to 1910. The estimated increase in the population of the State for the year is 72,964; hence the growth of population would have accounted for an increase of 63 in the first cases of insanity. As shown above, there was an actual increase of 448.

THE NATIVITY

of such first cases of insanity does not differ materially from the percentages of the previous year. Exclusive of 31, or .99 per cent., whose birthplaces were unknown, 1,195, or 38.84 per cent., were born in Massachusetts; 1,492, or 48.48 per cent., in New England; 1,683, or 54.70 per cent., in the United States; and 1,394, or 45.30 per cent., in foreign countries.

THEIR PARENTAGE

also corresponds substantially with the percentages of previous years. Exclusive of 272, or 8.75 per cent., whose birthplaces were unknown, 465, or 16.39 per cent., of the mothers were born in Massachusetts; 741, or 26.12 per cent., in New England; 885, or 31.21 per cent., in the United States; and 1,951, or 68.79 per cent., in foreign countries.

Exclusive of 266, or 8.55 per cent., whose birthplaces were unknown, 452, or 15.90 per cent., of the fathers were born in Massachusetts; 731, or 25.72 per cent., in New England; 868, or 30.54 per cent., in the United States; and 1,974, or 69.46 per cent., in foreign countries.

THEIR AGES

vary but little from the averages of previous years. The age of 60 or more had been reached by 638, or 20.65 per cent., when admitted for hospital treatment; by 480, or 18.17 per cent., when insanity began. The mean age was 43.57 years on admission; 40.56 years at the onset of mental disease.

THE LOCALITIES

where they resided at the time of commitment, and where insanity developed, in the main show that the country districts furnish relatively fewer cases of insanity than the more populous centers. The cities and towns of over 10,000 inhabitants comprise 74 per cent. of the total population of the State for 1910, and country districts only 26 per cent., whereas 2,597, or 83.69 per cent., of the commitments were made from the former, and 506, or 18.45 per cent., from the latter.

THE CAUSES OF INSANITY

assigned by the physicians of the hospitals were physical in 1,928, or 62.03 per cent.; mental in 142, or 4.57 per cent.; unknown in 1,026, or 33.01 per cent.; and not insane in 12, or .39 per cent.

Congenital causes were assigned in 7.79 per cent.; heredity alone in 4.05 per cent., with other causes, 11.90 per cent., making heredity a causative factor in 15.95 per cent.; alcoholic intemperance alone in 13.96 per cent., with other causes, 4.50 per cent., making alcohol a causative factor in 18.46 per cent.; senility in 11.45 per cent.; coarse brain lesions in 10.33 per cent.; and syphilis in 8.72 per cent. These six causes were operative in 72.70 per cent. of this year's first cases of insanity.

THE CURABILITY OF MENTAL DISEASE

in this year's first cases of insanity is practically the same as last year, and does not vary materially from the average.

The mental disease was classed as curable in 699, or 22.49 per cent., of first cases, compared with 23.68 per cent. the previous year, and 23.06 per cent., a four years' average. The

outcome in 5,312 such cases (a nine-year period) indicates an expectation of recovery in 1 out of 2.19 cases.

The mental disease was classed as generally incurable in 1.085, or 34.91 per cent. The outcome in 8,082 such cases (a nine-year period) indicates an expectation of recovery in 1 out of 27.03 cases.

The mental disease was classed as incurable in 1,061, or 34.14 per cent. The outcome in 8,128 such cases (a nine-year period) indicates an expectation of recovery in 1 out of 1,625 cases.

CERTAIN FORMS OF MENTAL DISEASE

occur with great frequency; manic-depressive insanity in 11.94 per cent. of this year's first cases of insanity and in 53.07 per cent. of the forms of mental disease classed as curable; and acute alcoholic insanity in 6.92 per cent. of first cases and in 30.75 per cent. of the forms classed as curable. These two forms comprised 17.86 per cent. of first cases, compared with 19.41 per cent. the previous year, and 19.32 per cent., a two years' average. They comprised 83.82 per cent. of forms of mental disease classed as curable, compared with 82.06 per cent. the previous year, and 83.29 per cent., a three years' average. They furnished 72.06 per cent. of first recoveries, compared with 69.01 per cent. the previous year, and 73.64 per cent., a three years' average.

In the groups classed as incurable and generally incurable, dementia praecox occurred in 17.66 per cent. of first cases; chronic alcoholic insanity in 4.89 per cent.; imbecility in 4.79 per cent.; senile insanity in 11.16 per cent.; epileptic insanity in 2.32 per cent.; general paralysis in 7.98 per cent.; and coarse brain lesions in 7.79 per cent. These seven forms, classed as practically incurable, comprised 56.59 per cent. of first cases of insanity, and furnished 3.65 per cent. of first recoveries.

These nine forms of disease comprised 74.45 per cent. of this year's first cases of insanity, compared with 81.41 per cent. the previous year, and 79.67 per cent., a three years' average.

THE DURATION OF MENTAL DISEASE

previous to hospital treatment was less than three months in 959, or 36.56 per cent., of first cases, compared with an average of 37.73 per cent. the last four years; less than six months in 1,260, or 48.04 per cent., compared with an average of 49.43 per cent. the last four years; less than one year in 1,520, or 57.95 per cent., compared with an average of 60.03 per cent. for four years; and one year or more in 1,103, or 42.05 per cent., compared with an average of 39.97 per cent. for four years.

The significance of the previous duration of mental disease is evident from the fact that out of 2,584 first recoveries (a nine-year period), 72.41 per cent. had a previous duration less than three months; 83.86 per cent. less than six months; 91.60 per cent. less than one year; and only 8.40 per cent. one year or more; while the whole duration of insanity was less than three months in 28.36 per cent.; less than six months in 58.20 per cent.; less than one year in 77.48 per cent.; and one year or more in only 22.52 per cent. These percentages have been substantially constant for the last nine years.

DISCHARGES.

THE RESULTS OF MENTAL DISEASE

are shown in the condition of patients on discharge; 520 recovered; 365 were capable of self-support, 560 were improved, 492 not improved and 70 not insane.

THE RECOVERY RATE

for the whole State was 13.52 per cent. of commitments, compared with 15.08 per cent. the previous year, and 14.30 per cent., a two years' average.

The percentages of recoveries in public institutions and McLean Hospital were:—

Of commitments (inclusive of

insane voluntary), 13.33; last two years' average, 14.08

Of whole number of persons, . . . 3.08; last two years' average, 3.09

Of daily average number, . . . 3.96; last two years' average, 3.96

There were 383 recoveries of first cases of insanity, being 12.32 per cent. of such, compared with 13.35 per cent. the previous year, and 12.84 per cent., a two years' average.

There were discharged,

CAPABLE OF SELF-SUPPORT

from public institutions and McLean Hospital, 258, or 6.61 per cent. of the commitments, compared with 10.05 per cent. the previous year.

THE RESTORATION OF THE INSANE

for the whole State to self-support in the community includes both the recovered and those discharged capable of self-support. Together they numbered 929 this year. The percentages of both these classes in public institutions and McLean Hospital were:—

Of commitments (inclusive of

insane voluntary), 22.68; last two years' average, 23.77

Of whole number of persons, . . 5.24; last two years' average, 5.33

Of daily average number, . . . 6.73; last two years' average, 6.62

DEATHS.

THE DEATH RATE OF THE INSANE

for the whole State during the year was 80.1 per thousand of the whole number of persons treated, compared with 74.3 the previous year, and 77.2, a two years' average.

The percentages of deaths in public institutions and McLean Hospital were:—

Of whole number of persons, . . 8.08; last five years' average, 7.89

Of daily average number, . . . 10.38; last five years' average, 9.92

Of discharges and deaths, . . . 40.70; last five years' average, 44.29

Mental disease classed as curable was present in 9.24 per cent. of persons who died, compared with 6.55 per cent. the previous year.

The percentage of deaths of first cases occurring within the first three months of hospital residence was 29.63, against 30.51 in 1912, 28.09 in 1911, 29.45 in 1910, and 29.39 in 1909.

Senile insanity was present in 20.97 per cent., general paralysis in 15.47 per cent., and coarse brain lesions in 13.93 per cent.

These supposedly incurable brain lesions existed in 50.37 per cent., compared with 58.95 per cent. the previous year.

Tuberculosis was present in 10.48 per cent., compared with 11.86 per cent. the previous year.

Pneumonia (lobar, broncho and hypostatic) was present in 17.30 per cent., organic disease of the heart in 13.56 per cent., organic disease of the kidneys in 4.55 per cent., and malignant tumors in 2.79 per cent.

The statistical data on which the foregoing statements and conclusions are based are found in Tables Nos. 19, 20 and 21 of the Appendix.

THE FEEBLE-MINDED.

THE WHOLE NUMBER OF THE FEEBLE-MINDED

under care Oct. 1, 1913, was 2,406, being 1 feeble-minded person to every 1,488 of the estimated population of the State.

The feeble-minded appear under public care in public institutions and almshouses, and under private care in private institutions. Their number and increase in these locations for the year and the last five years are shown as follows:—

	NUMBER OCT. 1, 1913.			INCREASE OVER PREVIOUS YEARS.					AVERAGE INCREASE, FIVE YEARS.
	Males.	Females.	Totals.	1913.	1912.	1911.	1910.	1909.	
School for the Feeble-minded at Waltham.	901	596	1,497	56	66	22	48 ¹	118	42.8
Wrentham School,	190	233	423	19	137	53	172	71	74.8
Hospital Cottages for Children, .	6	16	22	8 ¹	—	13	2	1 ¹	1.2
Almshouses,	143	109	252	13 ¹	35	31	17 ¹	23	11.8
State Infirmary,	51	93	144	23	53	68	—	—	28.8
Total, public,	1,291	1,047	2,338	77	291	187	109	133	159.4
Elm Hill,	43	12	55	3	1 ¹	—	5 ¹	—	.6 ¹
Small private institutions, . .	7	6	13	3 ¹	5	1	10	—	2.6
Total, public and private, . .	1,341	1,065	2,406	77	295	188	114	133	161.4

¹ Decrease.

THE INCREASE OF THE FEEBLE-MINDED

under care for the year was 77, compared with 295 the previous year, and 161, the average the last five years.

The number of nonresident feeble-minded was 70, compared with 74 the previous year. Of these, 40 were patients in private institutions; and 30, private patients in State institutions.

It is the policy of the State to receive feeble-minded persons from other States only when there is no school for the feeble-minded in such States, and then only in urgent cases. The nonresident patients are paid for at a rate which fully compensates the State for the cost of their maintenance.

The increase of the feeble-minded under public care was 77, compared with 291 the previous year, and 159, the average the last five years.

The increase of the feeble-minded in public institutions was 90, compared with 147.6, the average the last five years.

THE EPILEPTIC.

THE WHOLE NUMBER OF THE EPILEPTIC

under care Oct. 1, 1913, was 1,436, being 1 epileptic to every 2,493 of the estimated population of the State. There were enumerated in the State census of 1905, 2,140 epileptics, of whom 1,016 were living in the community. This figure is probably far below the actual number in the State if an accurate enumeration could be made.

The epileptic appear under public care in the Monson State Hospital, the State hospitals and asylums, and other public institutions, and under private care in private institutions. Details will be found under the Monson State Hospital.

Their number and increase in these locations for the year and for the last five years are shown as follows: —

	NUMBER OCT. 1, 1913.			INCREASE OVER PREVIOUS YEARS.					Average Increase, Five Years.
	Males.	Females.	Totals.	1913.	1912.	1911.	1910.	1909.	
Monson Hospital, . . .	471	451	922	35	36	81	75	8	47.0
State hospitals and asylums, .	242	155	397	18 ¹	35	61 ¹	-	45	.2
Other public institutions, . . .	60	45	105	9	15 ¹	21 ¹	7	22	.4
Total, public, . . .	773	651	1,424	26	56	1 ¹	82	75	47.6
Private institutions, . . .	5	7	12	1	-	3 ¹	-	2	-
Total, public and private, .	778	658	1,436	27	56	4 ¹	82	77	47.6

¹ Decrease.

In addition the overseers of the poor report (March 31, 1913) 81 epileptics in city and town almshouses and private families.

THE INCREASE OF THE EPILEPTIC

under care for the year was 27, compared with an increase of 56 the previous year, and 47.6, the average increase the last five years.

The increase of the epileptic under public care was 26, compared with an increase of 56 the previous year, and 47.6, the average increase the last five years.

The number under private care increased 1.

THE INEBRIATES.

THE WHOLE NUMBER OF INEBRIATES

under hospital care Oct. 1, 1913, was 160, being 1 inebriate to every 22,380 of the estimated population of the State. This number comprises only a very small fraction of the whole number of inebriates, there having been for the year ending Sept. 30, 1913, 17,281 commitments to penal institutions, and 5,432 persons committed for the first time.

It is the intention to exclude from hospital care criminal inebriates and those who are not of good character and reputation, apart from habits of inebriety.

The State provides a special hospital for the treatment of male inebriates, but women are excluded therefrom, and con-

tinue to be committed as inebriates to State hospitals for the insane. The private institutions receive only a few such patients.

Their number and distribution in these locations Oct. 1, 1913, are shown as follows:—

	NUMBER OCT. 1, 1913.			INCREASE OVER PREVIOUS YEARS.					Average Increase, Five Years.
	Males.	Females.	Totals.	1913.	1912.	1911.	1910.	1909.	
Foxborough Hospital, . . .	102	-	102	71 ¹	6	58	17	5	3.0
State hospitals, . . .	-	51	51	16	6	6 ¹	5	6	5.4
Total, public, . . .	102	51	153	55 ¹	12	52	22	11	8.4
Private institutions, . . .	4	3	7	1	5	1 ¹	2 ¹	-	.6
Total, public and private, .	106	54	160	54 ¹	17	51	20	11	9.0

¹ Decrease.

THE DECREASE OF THE INEBRIATES

under hospital care was 54, compared with an increase of 17 the previous year, and an average increase of 9 the last five years.

The decrease of inebriates under public care was 55, compared with an increase of 12 the previous year, and an average increase of 8 the last five years.

The number under private care shows little variation.

Further details in regard to inebriates will be found under Foxborough State Hospital and in Table No. 11 of the Appendix.

REPORT OF THE PATHOLOGIST.

To the State Board of Insanity.

Contents.—Psychopathic Hospital as an investigation station from which the State Board's pathologist can initiate work under the appropriation for special investigation; duties of the pathologist with estimate of time spent; supervision *versus* control of medical work in the institutions; advantages of extensive local autonomy for medical advance; illustration of central co-operation and local initiative in the scientific advances at Monson Hospital (for epilep-

tics); powers and duties of the Board of Insanity with respect to scientific investigation; desirability of developing the Psychopathic Hospital still further as investigation station; centering of social investigation there;

Arguments for having the State assume the work of the (non-commercial) Wassermann laboratory of the Harvard Medical School;

Review of five years' work, with listing of topics specially taken up (1909-13);

Work of the public institutions and McLean Hospital;

Work of the State Board under that portion of its appropriation devoted to investigation of the nature, causes, results, and treatment;

Summary.

As pathologist to the State Board of Insanity, I wish to present herewith a report of work from Dec. 1, 1912, to Nov. 30, 1913, being my fifth report, and the fourth to cover a full year's work. The first three years of the period in question, viz., May 1, 1909, to April 30, 1912, were spent in work directly under the Board as a salaried officer. Upon May 1, 1912, my designation as pathologist to the Board became an honorary title, by reason of my assumption of new duties as director of the Psychopathic Department of the Boston State Hospital.

Although I was somewhat concerned lest the new duties of the Psychopathic Hospital directorate should interfere with the broader and less concrete duties of the State Board's pathologist, I have found that the duties of the two positions are to a large extent identical, and that, on the one hand, the Psychopathic Hospital has tended to become in effect an investigation station for the State Board and the training school for a number of physicians in the service of other State institutions, and, on the other hand, the State Board's point of view on medical matters has more quickly penetrated to the institutions, only to be reacted upon and modified to the benefit of all concerned.

The proper expenditure of the State Board's special investigation appropriation has been facilitated by the possibility of using some of the funds directly upon problems in the Psychopathic Hospital under my supervision (*i.e.*, experiments with salvarsanized serum; see below).

The duties of the State Board's pathologist as defined in the terms of appointment, May 1, 1909, are "(1) *supervision of the clinical, pathological and research work* in the various institutions

under the Board's general supervision; (2) *visits* to the institutions from time to time; and (3) *reports* to the Board, *comprising conditions observed* and such *recommendations* as result therefrom."

Last year I remarked that the number of visits which could be made to the institutions would naturally become smaller than previous years. In point of fact, 18 visits were made during the year despite my absence for some weeks upon a trip to attend the Seventeenth International Congress of Medicine at London, in August.

During the five years of my appointment I have made visits as follows: 1909, 38; 1910, 47; 1911, 16 (during this year I spent four months abroad); 1912, 26; 1913, 18: making a sum total of 145 visits and omitting a number of visits in 1912 and 1913 to the main departments of the Boston State Hospital. I calculate that about forty working days of each year have been spent upon this work in the immediate visitations. The amount of time devoted to conferences at the State Board of Insanity's office and at the Psychopathic Hospital cannot be more than estimated.

I wish, as in previous years, to report the courtesy and interest of the different officers of the institutions in the work of the pathologist.

In my first report I had occasion to commend the institutions for developing their own special lines of work derived from special lines of cases or special conditions. These laboratories require, as needs dictate, special apparatus for special work, and by "a system of interchange of material, which is now being developed, the different institutions can profitably pool the special issues where they will secure the most expert attention."

The co-ordination of investigations in various related fields is a difficult matter at the best; but the present arrangement, in which the Psychopathic Hospital is in effect an investigation station of the State Board of Insanity but has fairly definite and concrete relations to the various institutions of the State, is an arrangement which seems to secure not merely the advantages of centralization, but those of local autonomy. The blood circulates not alone in the heart, but in the remotest organs and limbs. But were we to do away with the central institution we should undoubtedly cause various small institutions, in which it is for the moment uneconomical to establish laboratories, to lose the advantage of being able to call upon State authorities for the solution of special problems. On the other hand, if we should do away with the local laboratories we should tend to abolish local enthusiasm as well as the actual capacity to settle certain hygienic and psychiatric prob-

lems on the spot. It is idle to suppose that any central institute can have a director or officer so broad minded and well equipped as to be able to undertake making additions to our knowledge of *all* such uppermost topics as mental disease due to syphilis, mental disease due to alcoholism, the effects of heredity, the idiopathic and organic epilepsies, and the various present-day problems of feeble-mindedness which specially press for solution. There is practically no institution in the State which will not sooner or later for periods of years undertake special investigations, the majority of which will require either special officers or special laboratory apparatus. These problems cannot be cut off with a yardstick, nor can it be predicted whether they will remain quietly within the bounds of the science in which they happen to start. A host of examples could be cited to illustrate these points. I will mention only the work at the Monson State Hospital, which, although of modest dimensions and of an expense economically almost negligible, has amounted to a considerable advance in several lines, of which may be mentioned (a) contributions to the extent to which organic brain disease plays a part in epilepsy; (b) studies in the lesions of the viscera of the trunk; (c) solution of one of the most important problems presented by Brown-Séquard's experimental epilepsy; (d) important work in the analysis of hereditary data. For the moment, the Monson State Hospital is not employing a special research officer, and it has seemed best that the State Board of Insanity should, by means of its special investigation fund, forward this work by means of total brain sections of certain important cases in which the epilepsy was probably due to encephalitis. In this connection, under the State Board's special investigation appropriation, special work has been done to determine the exact scope of the inflammatory disease in encephalitis in the production of epilepsy. This problem is of importance because it bears on the essential preventability of certain kinds of epilepsy. The eugenics worker at the Psychopathic Hospital has aided a portion of this investigation into the after-history of cases suffering from encephalitis. All told, their work has been done upon novel features of epilepsy by at least five workers specially trained for the work which each undertook, and these workers have worked under three different boards of trustees. It is clear that the work would never have been accomplished if it had not been for the local and autonomous interests of the Monson board; yet it is also clear that the other two institutions engaged were also indispensable in the general line of attack on this problem.

The question has at times arisen whether the State Board of Insanity should not be given powers greater than those now conferred upon it by law with respect to investigation. These powers and duties are (a) to "*encourage scientific investigation by the medical staffs of the various institutions under its supervision*" and (b) to "*publish from time to time bulletins and reports of the scientific and clinical work done therein*" (as defined by statute of which the latest revision is Acts of 1909, chapter 504, section 6). In addition to these powers the Board's potential capacity to act as commissioners of insanity (Acts of 1909, chapter 504, section 9) gives it a certain power to investigate conditions of individual cases intimately, which should lead to the occasional employment of the Psychopathic Hospital as investigation station. The necessity of careful and intensive clinical investigation and even of still broader investigation is the greater now that the non-restraint law (Acts of 1911, chapter 589) has gone into effect. As experience and legislation grow it becomes increasingly a function of the State Board to investigate medical, as well as administrative, legal and financial conditions of the institutions.

I would accordingly bring up for consideration the question whether the Psychopathic Hospital might not appropriately become still more effectively the investigation station of the State Board of Insanity. The Psychopathic Hospital is certainly a practical success in the sense of stimulating the early access of mental cases to expert examination (both under the temporary care (seven-day) act, Acts of 1911, chapter 395, and the mental disorder act, Acts of 1910, chapter 307); it would not do to jeopardize a practical success by searching for theoretical new advantages. Beyond question, however, the Psychopathic Hospital's scope is State-wide. In the first place, it receives a large fraction of all the admissions of the State (1,523 during 1913); and it receives admissions of all classes of mental patients except those who would be committed under the regular commitment law. Under special conditions, a number of patients from outside the metropolitan district have been permitted by the State Board of Insanity to come to the Psychopathic Hospital; and this policy has met with approval by a number of non-metropolitan physicians and officials. A few cases have been transferred from other State institutions to the Psychopathic Hospital for special investigation; this policy is certainly to be encouraged, as also the interchange of patients between institutions which may be engaged in special investigations into one or other condition. The Psychopathic Hospital has had officers from various

institutions, or has contributed officers to such institutions as follows: Boston State Hospital (Main Department), Taunton State Hospital, Monson State Hospital, Northampton State Hospital. The problems undertaken by the hospital have been in many cases of general interest. I would refer especially to Myerson's work with salvarsanized serum for syphilitic cases and Yerkes' work with mental tests.

Of course in the dim future we have the highest hope that psychopathic hospitals like that erected in Boston will be erected in other parts of the State, but until society is better satisfied with exchange of visible large expense for invisible much larger losses, and comes to a clear conception of the social insurance value of our State hospital work, it is dubious whether hospitals of the higher weekly per capita cost of the institution in Boston will be at all freely considered as possibilities for other portions of the State. I have calculated also that about half, or possibly more than half, of the after-care and preventive work of the State would center in the metropolitan district; and it is a question whether it would not be well to concentrate some forms of social investigation at the Psychopathic Hospital, to the end that better methods of after-care and more effective methods of prevention be devised.

Despite all these arguments for the State-wide nature of the Psychopathic Hospital's task, and the investigative value which its work would potentially have for the State Board of Insanity, it is a knotty question whether the State Board should undertake a task that in some ways is more intimate and special than any it has hitherto undertaken.

LABORATORY FOR WASSERMANN TESTS FOR SYPHILIS.

In my capacity as professor of neuropathology in the Harvard Medical School, I have been operating for some years a laboratory for the employment of the Wassermann test for syphilis, which during the last year performed over 6,000 such tests, the majority of which were performed for patients in the institutions under the supervision of the State Board of Insanity, although a not insignificant number were performed for other institutions. This laboratory has been operated on a non-commercial basis, and, so far as contingencies permitted, at cost. The work has developed to such a point that it has now become a fair question whether the work cannot be performed by the State Board of Insanity alongside of the function of the Bureau of Standards which it has begun to operate. The State Board's Bureau of Standards has, with the

co-operation of the trustees of the Boston State Hospital, been placed in suitable quarters in the Psychopathic Hospital. It would be highly desirable for the Wassermann laboratory to be similarly placed in the Psychopathic Hospital building, provided the co-operation of the Boston State Hospital Trustees could be secured. It could be readily demonstrated that the operation of a Wassermann laboratory in the Psychopathic Hospital would not be attended with the expenditure of more money on the part of the State. It is possible that a slight saving could be effected. I desire to suggest to the State Board of Insanity that this plan be brought to the attention of the next General Court, provided that suitable arrangements can be made with the trustees of the Boston State Hospital. It would probably be possible for the special arrangements to be made for the performance of Wassermann tests by the laboratory for other State institute boards or institutions which might desire the work.

An examination of the statistics of Wassermann examinations as performed during the year 1913 in the Harvard laboratory has shown a number of facts extremely important from the social point of view. These have been embodied in a brief paper in press in the "Boston Medical and Surgical Journal" at this writing. Several other papers noted below have been written which have utilized the work of the Harvard laboratory. It should be stated that the attitude of the Harvard laboratory (department of the diseases of the nervous system) is and has been a co-operative attitude. The medical authorities are, I believe, of the general opinion that the Medical School should undertake in addition to its teaching functions such research functions as private enterprise and private funds may be found to support. While the Wassermann test was still, as it were, *sub judice*, it was perfectly proper that the Medical School should perform the work. Now that the test has become a matter of approved routine and its cost can be exactly estimated, it seems proper that the State should take the work over, and thus make way in the Medical School for other work more suitable to the teaching and special research functions of the Medical School.

REVIEW OF FIVE YEARS' WORK.

It seems proper to take this occasion to enumerate some of the general and special investigations which have been made during the first five years of my appointment as pathologist. It should

be said that these results argue as much for the autonomy and independence of the various institutions which have produced them as for the supervisory powers of the State Board of Insanity which has endeavored to encourage them. The following list includes those topics which have been specially mentioned in previous reports as indicated at the head of each group:—

1909.

1. Diagnosis of mental disease arising between fifty and seventy years of age (Mitchell and Southard).
2. Danvers senile dementes (Southard); Taunton senile dementes (McGaffin).
3. Errors in the diagnosis of general paresis (Southard).
4. Correlation of general and epileptic hospital records (Lucas).
5. Heredity.
6. Medical histories of supercustodial standard.
7. Physical disorder more prominent in early attacks of manic-depressive insanity (T. A. Hoch, Worcester).
8. Utilization of asylum material.
9. Institutional hygiene.
10. Value of epidemiological work.
11. System of interchange of material.
12. Classification of diphtheria bacilli (M. E. Morse, Danvers, Boston).
13. Topographical cerebral cortex work (S. T. Orton, Worcester).
14. Aphasia with total brain sections (S. C. Fuller, Westborough).
15. Neurofibril work (S. C. Fuller, Westborough).
16. Work on Brown-Séquard's experimental epilepsy (L. B. Alford, Monson).
17. Psychopathology (F. L. Wells, McLean).

1910.

1. Institutional hygiene, experimental work on flies and dysentery (S. T. Orton).
2. Organization of co-operative work by laboratories of different institutions.
3. Cell-changes in dementia præcox and manic-depressive insanity (satellitosis, S. T. Orton).
4. Contact epidemic of diphtheria elaborately studied, Danvers (H. M. Adler). Diphtheria, Boston, special study of diphtheria bacillus group (Mary E. Morse).
5. Publication of 18 scientific papers in honor of Dr. C. W. Page (Danvers).
6. Senile and involutional brains (S. C. Fuller).

7. Paratyphoid epidemic specially studied, Boston (Gill, Canavan, Richards).
8. Brown-Séquard's epilepsy, Monson (L. B. Alford).
9. Wassermann tests for syphilis.
10. "Unclassified" group of mental diseases, and the "obscure" group, Danvers (L. B. Alford).
11. Eugenics work.

1911.

1. Flytraps of use in solving dysentery problem, Worcester (S. T. Orton).
2. Family pathography, Taunton (C. G. McGaffin).
3. Reduction of number of intestinal diseases, Danvers.
4. Suppression of a threatened diphtheria epidemic, Danvers.
5. Work of the destruction of nerve tissue produced by fatty acids, Danvers (H. M. Adler).
6. Facial asymmetry, Danvers (H. M. Adler).
7. Experimental pernicious anemia, Danvers (H. M. Adler).
8. Alcoholic psychoses, Danvers (H. W. Mitchell).
9. Prognoses in dementia praecox, Danvers (Stearns and Mitchell).
10. Alzheimer's disease, Westborough (S. C. Fuller).
11. Important laboratory planned, Tewksbury.
12. Heredity work and eugenics (Boston, Monson, Taunton).
13. Alkylamines in body fluids, McLean (Erdman).
14. Galvanometric work, McLean (Wells and Forbes).
15. Mental association study, McLean (Wells).
16. Investigation of milk supply (Boston; Danvers, pasteurization).
17. Antityphoid vaccination of nurses and attendants (Westborough, Boston, Danvers).

1912.

1. The determination of the syphilis factor (Wassermann serum tests at Boston, Danvers, Taunton, Tewksbury, Worcester). Acute material, like that of the Psychopathic Hospital or the admission service at Danvers, yields 15 to 20 per cent. syphilis.
2. Establishment of the desirability, if not the absolute necessity, of routine serum tests for syphilis (Danvers, Psychopathic Hospital).
3. Heredity studies (Boston, Monson, Danvers, Taunton).
4. After-effects of acute diseases of the nervous system (State Board).
5. New arm of prophylaxis (investigation in the community of late results of acute disease of the nervous system as recorded in children's hospital records, State Board).
6. Psychiatric symptom-index for general use (in preparation, State Board).

7. Geographical distribution of insanity in Massachusetts (State Board).
8. Systematic study of brain anatomy in dementia *præcox* (State Board, using material of several institutions by courtesy).
9. Method for quantitating the degree of complexity of convolutional pattern on brains (State Board).
10. Active and extended correlation of laboratory and clinical aims and ideals (Danvers, Worcester, Psychopathic Hospital).
11. Standardization of association tests (Wells, at McLean Hospital).
12. Chemical studies (Erdman, McLean Hospital).
13. Analysis of personality (Abbot and Bond, McLean Hospital).
14. Dysentery problem (Orton, at Worcester Hospital).
15. Issuance of series of papers in honor of Drs. H. M. Quinby of Worcester State Hospital and G. S. Adams of Westborough State Hospital.
16. Organization of the Psychopathic Hospital with work under way as follows:—
 - (a) Correlation of Wassermann tests with clinical and somatic conditions (W. P. Lucas).
 - (b) Routine study of the blood picture in various types of mental disease (O. W. Grisier).
 - (c) Acidosis in mental disease (D. Gregg).
 - (d) Treatment of symptomatic psychoses (E. E. Southard).
 - (e) Lowering and raising of the feradic threshold by Prof. E. G. Martin's method (G. P. Grabfield, voluntary worker).
 - (f) Study of pellagroid conditions with ultra violet rays in rabbits (H. M. Adler).
 - (g) Study of neurolysis by fatty acids (H. M. Adler).
 - (h) Statistical study of delusions bearing on the Wernicke classification (A. W. Stearns).
 - (i) Meaning and range of the Binet-Simon tests and the Healy tests for mental and motor capacity (V. V. Anderson).
 - (j) Structure versus function in psychopathology based on analysis of available anatomical material, Danvers and Worcester collections (E. E. Southard).
 - (k) Differentiation of alcoholic mental diseases in the light of the provision of the law excluding cases of delirium tremens (A. W. Stearns).
 - (l) Studies in eugenics bearing on the problem of interplay of hereditary and somatic factors (W. P. Lucas and Anna E. Steffens).

The especial work of 1913 will be summed up at the end of this report, after the work of the separate institutions has been considered in the form of extracts.

WORK OF THE FUTURE.

It seems to your pathologist that the good work so far done by our institutions in the direction of medical science can only warrant a continuance and extension of the policy adopted. There is no question that the care and treatment of the patients have been the better for the existence of the laboratories in the institutions, not merely because (a) the correct diagnosis has been made earlier by means of laboratory devices, and because (b) actual improvements in theory and practice have been made in the course of laboratory researches, but also because (c) a higher type of assistant physician has been drawn into our field through the improved opportunities for work rendered possible by the laboratories.

Upon the concrete basis of work already done I think it is clear that a further elaboration and systematization of our scientific attack on the problems of insanity and allied defects can be outlined. If the State Board chooses to develop systematic work it can find a model in New York State, where for many years there has been a central institute controlled by the Board of Lunacy. The object of this institute, at first called "pathological" but later termed more broadly "psychiatric," has been to aid in the training of physicians and maintain the standard of medical efficiency in the hospitals. (1) Autopsy material from the hospitals has been worked up; (2) the institute members have taken prominent parts in interhospital meetings; (3) courses of instruction have been given in the institute.

The existence of the Psychopathic Hospital in the midst of other high-grade hospitals and medical institutions gives Massachusetts a chance to initiate work like that of New York on perhaps an even better basis than can New York at present. In point of fact, the New York authorities are working to secure an institution like our Psychopathic Hospital to improve their own work.

The arguments for further developments toward the ideal of "investigation station" or "psychiatric institute" for Massachusetts are convincing; but their demonstration would require too extended treatment for presentation here.

At present I wish to argue for the small but concrete step of establishing an assistant to the pathologist who with technical aid can execute some of the plans which are now ripe.

WORK OF THE INSTITUTIONS.

The work of the institutions will be presented in the form of excerpts from their reports:—

Worcester State Hospital.

The superintendent, Dr. Ernest V. Scribner, notes:—

- (1) The occurrence of a few more cases of dysentery in the summer, and the continuation of laboratory work therein.
- (2) Increase in number of cases of doubtful diagnosis ("observation" cases sent in by physicians more than formerly).
- (3) Non-restraint policy in vogue a year (two cases were exceptions).
- (4) Employment of student internes in summer.

(5) Resignation of Dr. Samuel T. Orton, clinical director and pathologist, to take a similar position in the Pennsylvania Hospital for the Insane (Oct. 25, 1913).

The pathologist, Dr. Samuel T. Orton, notes:—

- (1) Card index system for insuring efficiency of record making.
- (2) Morbidity record and wall board system for recording occurrence of infectious diseases.
- (3) Emphasis on flies as an important factor in spread of dysentery.
- (4) Appointment of Dr. Mary E. Morse as assistant pathologist (Jan. 1, 1913).

Taunton State Hospital.

The trustees note:—

- (1) More quiet and order on the wards, due to the influence of employment of patients.
- (2) Nurses' training school affiliations, providing more variety and scope in work.
- (3) Reorganization of clinical and pathological service by Dr. A. Myerson.

The superintendent, Dr. Arthur V. Goss, notes:—

- (1) Dental examinations of 476 patients.
- (2) Employment, to a greater or less extent, of 1,349 patients, being 78.9 per cent., with a daily average of workers of 796 patients.
- (3) Prize system for greatest nursing efficiency.
- (4) Clinics for local physicians.

The new clinical director and pathologist, Dr. Abraham Myerson, after reporting the conclusion of Dr. C. G. McGaffin's work, writes:—

The present pathologist proposes to continue the routine of pathological work as it is at present carried on, and has added to it researches in these directions:—

1. The chemistry of the spinal fluid in diseased states. Some original observations on this subject were read before the American Medical Society, and there is very good ground for believing that the organic diseases of the nervous system give their earliest signs in the altered chemistry of the spinal fluid.

2. Internal studies of the brain and other organs according to latest methods. These methods tend to show distinct pathological changes in mental diseases not yet so definitely understood, and this laboratory will work along the newer lines as they are developed.

The following researches have been started:—

1. *Treatment of General Paresis.*—The conception of this disease has been altered by the work of the Rockefeller Institute, in the demonstration of the organism of syphilis in the brains of patients dying of the disease. Methods of treatment, therefore, now stand out as possible.

2. *Family Studies.*—As at present conducted such studies usually end with a study of the family history of insane persons. This the present writer believes to be insufficient, and proposes to add to such investigation physical and mental examination of the relatives. Such complete studies will, it is believed, throw light on the hereditary relationship of the psychoses.

Northampton State Hospital.

The trustees note attention to the question of a Berkshire branch. The superintendent notes:—

- (1) Increasing proportion of dotards.
- (2) Fourth year of out-patient work.
- (3) Consultation service by the superintendent for the community.

Danvers State Hospital.

The superintendent notes:—

- (1) Policy continued of introducing all cases for discharge at the staff meetings, held daily at 8 A.M.
- (2) Desirability of revising salary schedule for physicians.
- (3) Prompt measures to prevent diphtheria in cases which had come in contact with a case from whose larynx the diphtheria bacillus was recovered post mortem.

- (4) Routine Wassermann tests of the serum of all cases, and of the cerebrospinal fluid in cases whose serum is positive.
- (5) Continuance of eugenics and social work.
- (6) Desirability of a modern reception hospital.
- (7) Special dental and ophthalmological work.
- (8) Employment of 5 student internes.

Papers have been prepared as follows:—

- XXVI. "Brain Tumor Operation, Autopsy Findings." Drs. E. D. Bond and A. H. Peabody. Boston Medical and Surgical Journal.
- XXVII. "Results of the Wassermann in Two Hundred Consecutive Admissions." Dr. H. L. Paine. Boston Medical and Surgical Journal.
- XXVIII. "Personality and Outcome in Two Hundred Consecutive Cases." Dr. E. D. Bond. American Journal of Insanity.
- XXIX. "Keratosis." Dr. W. B. Cornell.
- XXX. "Cysts and Heroin." Drs. W. B. Cornell and A. H. Peabody.
- XXXI. "The Experimental Production of Pernicious Anemia in Rabbits." Dr. H. M. Adler. Journal of Medical Research.
- XXXII. "The Analysis of Spleen Weights in 1,000 Cases of Insanity." Dr. H. M. Adler.
- XXXIII. "A Note on the Eosin Methylene-blue Stain with Remarks on the Nature of Oxyphilic Granules." Dr. H. M. Adler.
- XXXIV. "Third Note on the Persistence of Agglutinins for *Bacillus Dysenteriae* in the Danvers State Hospital Cases." Dr. M. M. Canavan.
- XXXV. "Symptoms suggesting Pituitary Disorder in Danvers State Hospital Patients." Dr. E. D. Bond. Read at the meeting of the New England Society of Psychiatry, March 27, 1913.
- XXXVI. "Statistical Study of Remissions in General Paralysis." Dr. H. L. Paine. Boston Medical and Surgical Journal.
- XXXVII. "Types of Paranoia in General Paralysis with Anatomical Correlations." Drs. E. E. Southard and A. S. Tepper. Journal of Abnormal Psychology.
- XXXVIII. "Insanity and Race." Dr. H. M. Swift. American Journal of Insanity.
- XXXIX. "Clinical and Anatomical Analysis of Cases arising in Fifth Decade." Drs. E. E. Southard and E. D. Bond.

XL. "Pellagra." Dr. J. B. Macdonald. *Boston Medical and Surgical Journal.*

XLI. "Bacterial Invasion of Blood and Cerebrospinal Fluid by Way of Lymph Nodes." Drs. M. M. Canavan and E. E. Southard. *The Journal of the American Medical Association.*

Westborough State Hospital.

The trustees note:—

(1) Increase in number of accidents to patients and attendants, which increase is ascribed to the practical application of the non-restraint law, chapter 589, Acts of 1911.

(2) Social service work by Dr. Alberta S. B. Guibord (21 cases).

The superintendent notes therapeutic developments in the direction of occupation (especially garden work).

The pathologist notes:—

(1) Work on cases of amyloid degeneration, establishing a general principle relating to the possibility of deducing all the nerve-cell and fiber changes in some cases from blood-vessel disease.

(2) Work in racial psychopathology.

(3) Work in cases of *Hirntod* (Alzheimer).

(4) Work on cases of aphasia.

(5) Work begun in search for spirochætes in general paresis.

(6) Work begun on delimitation of the calcarine cortex in cases with *Affenspalten*.

Boston State Hospital.

The trustees discuss the size of State hospitals and state that "the capacity of the whole institution can be increased to 3,000 without crowding too many buildings on the land," and that "it is now believed by some good authorities that 5,000 patients can be cared for under one management in one institution, provided there are buildings enough on a sufficiently large territory to maintain a suitable classification." They state that the time will come when a colony will be required.

The superintendent notes one death from pellagra.

The pathologist reports:—

(a) A paratyphoid epidemic (30 cases).

(b) Continuance of bacteriological examinations of blood and cerebrospinal fluid.

(c) Unusual number of cases of intracranial growth (5.5 per cent. of series).

- (d) Ten per cent. normal-looking brains.
- (e) Ophthalmoscopic work with post-mortem correlations.
- (f) Staff meetings in laboratory once a month.
- (g) Card indices of symptoms and lesions.

Psychopathic Department, Boston State Hospital.

The trustees state: —

The number of admissions for the year was 1,523, which more than equals the number set by the special report of the State Board of Insanity to the Legislature in 1908, which was 1,500. This seemed like an exaggeration at the time, born of enthusiasm for the cause of a psychopathic hospital. Facts, however, have quickly verified its correctness. We feel that the Psychopathic Hospital has demonstrated the absolute necessity there is for such an institution in the city of Boston. To have a hospital like this, where at any time, day or night, the subject of mental disease may be received and intelligently cared for, means everything to the patient, who, from lack of this intelligent care before, was often inhumanly treated.

The director's statistics show that about 1 in 4 cases remain unclassified (274 in 1,022 cases) in the "temporary care" group, and that about 1 in 6 "voluntary" cases remain unclassified (68 in 362 cases).

The director describes in detail the administrative arrangements entailed by the receipt of seldom less than 3 or 4 new patients and occasionally 16 or more during a day, — morning rounds by chief of staff, lay clinical historian, executive assistant, "officer-of-the-day" system, preservation of individuality and *rapport*, daily noon staff meetings, constructive mental nursing, tabulation of accidents, companionship worker.

The problem of the year has been the treatment of delirium and excitement, concerning which may be quoted conclusions of Dr. Donald Gregg in one of the Psychopathic Hospital contributions: —

First. The results of the eliminative treatment of the deliria with relative freedom and hydrotherapy, and a minimum amount of medication, far excels in effectiveness the usual treatment by restraint and depressant drugs in cases of the symptomatic psychoses, including alcoholism.

Second. Every general hospital should be provided with the facilities for treating properly cases of deliria. Such facilities should include isolation wards where quiet is not essential, and continuous bath apparatus for hydrotherapy.

Third. The present situation in Boston, where no general or insane hospital is ready to take and adequately care for cases of simple delirium tremens, is one that should be promptly remedied by the establishment of a public hospital properly equipped for the treatment of inebriety.

The problem of alcoholic mental disease is discussed. The out-patient department took care of 830 cases, of which 184 were cases

referred from the Psychopathic Hospital's own wards. Weekly social service clinics are held.

The Psychopathic Hospital contributions for 1913 are as follows:—

- 1913.1. E. E. Southard. "Contributions from the Psychopathic Hospital, Boston, Mass.: Introductory Note." *Boston Medical and Surgical Journal*, July 24, 1913.
- 1913.2. E. E. Southard. "Psychopathology and Neuropathology: the Psychopathic Hospital as Research and Teaching Centre." *Boston Medical and Surgical Journal*, July 31, 1913.
- 1913.3. Walter Channing. "Remarks at the First Anniversary Meeting of the Opening of the Psychopathic Hospital, June 24, 1913."
- 1914.4. Harvey H. Baker. "Juvenile Crime and Psychopathic States: The Legal Point of View."
- 1913.5. G. E. Eversole. "Voluntary Commitments and Voluntary Commitment Laws."
- 1913.6. V. V. Anderson. "On Certain Irregularities in Mental Defect Demonstrable by Mental Tests and suggesting Special Educative Measures."
- 1913.7. Mary C. Jarrett. "Statistical Notes on the Need of Social Service in the Psychopathic Out-patient Department."
- 1913.8. W. P. Lucas. "The Incidence of Syphilis (Wassermann Reaction) on 111 Consecutive Children examined in the Out-patient Department of the Psychopathic Hospital."
- 1913.9. A. W. Stearns. "Delirium Tremens and Alcoholic Hallucinosis with Special Reference to Previous History."
- 1913.10. Donald Gregg. "The Treatment of the Deliria in General Hospitals and in Hospitals for the Insane."
- 1913.11. H. M. Adler and B. H. Ragle. "Note on the Influence of Hydrotherapy on the Red Blood Cell Count in the Insane."
- 1913.12. John G. Blake. "Reminiscences concerning the Treatment of Delirium."
- 1913.13. A. Myerson. "Progress with the Treatment of Paresis by Salvarsanized Serum."
- 1913.14. E. E. Southard. "The Outlook for Work at the Psychopathic Hospital." *Note*. — Psychopathic Hospital Contributions 1913.3 to 1913.14 constitute the Annual Conference Papers issued in *Boston Medical and Surgical Journal*, Sept. 18, 1913.
- 1913.15. A. Myerson. "Hysteria with Fever and Ankle Clonus." *Boston Medical and Surgical Journal*, Aug. 7, 1913.
- 1913.16. A. Myerson. "Note on Adductor Response to Homolateral and Contralateral Stimulation." *Boston Medical and Surgical Journal*, Sept. 11, 1913.
- 1913.17. W. P. Lucas. "Note on Some Problems of the Adolescent as seen in the Psychopathic Hospital Out-patient Department, Boston, Mass." *Boston Medical and Surgical Journal*, Nov. 27, 1913.
- 1913.18. W. P. Lucas. "Report on Voice Clinic of the Out-patient Department of the Psychopathic Hospital." *Boston Medical and Surgical Journal*, Dec. 4, 1913.
- 1913.19. Constance Charnley. "Experiences in the Treatment of Vocal Disorders." *Boston Medical and Surgical Journal*, Dec. 4, 1913.
- 1913.20. Constance Charnley. "Some Observations on the Conditions and Treatment of Stuttering." *Boston Medical and Surgical Journal*, Dec. 4, 1913.
- 1913.21. A. Myerson and G. E. Eversole. "Notes on Sunlight and Flashlight Reactions and on Consensual Amyosis to Blue Light." *Journal of Nervous and Mental Diseases*, November, 1913.

1913.22. A. Myerson. "Note on Contralateral Oppenheim and Gordon Reflexes, with Observations in Two Cases." *Journal of Nervous and Mental Diseases*, Vol. 43, September, 1913.

1913.23. R. M. Yerkes. "Comparative Psychology in Relation to Medicine." *Boston Medical and Surgical Journal*, Nov. 27, 1913.

1913.24. R. M. Yerkes. "Comparative Psychology: A Question of Definitions." *Journal of Philosophy*, Oct. 9, 1913.

1913.25. R. M. Yerkes. "A Study of Human Behavior." *Boston Medical and Surgical Journal*, Oct. 9, 1913.

1913.26. E. E. Southard. "The Psychopathic Hospital Idea." *Journal of American Medical Association*, Nov. 29, 1913.

1913.27. L. H. Horton. "Inventory Record Forms of Use in Dream Analysis." *Journal of Abnormal Psychology*, February-March, 1914.

1913.28. Walter Channing. "Introductory Remarks at the Conference on Alcoholic Mental Disease." *Psychopathic Hospital*, Boston, Mass., Nov. 24, 1913.

1913.29. Michael J. Murray. "Work of the Massachusetts Legislative Commission on Drunkenness," 1913.

1913.30. Herman M. Adler. "Report of Clinical Demonstration of Alcoholic Mental Disease with Remarks on Current Practice at the Psychopathic Hospital, Boston, Mass."

1913.31. G. E. Eversole. "Consensual Amyosis to Blue Light as shown in Alcoholic Cases."

1913.32. A. W. Stearns. "Alcoholic Amentia."

1913.33. A. W. Stearns and Mary C. Jarrett. "Notes on After-care and Moral Suasion Work with Alcoholics in the Out-patient Department of the Psychopathic Hospital."

1913.34. E. E. Southard. "On Institutional Requirements for Acute Alcoholic Mental Disease in the Metropolitan District of Massachusetts in the Light of Experiences at the Psychopathic Hospital."

Note. — Nos. 1913.28 to 1913.34 constitute Notes of a Conference held at the Psychopathic Hospital, Boston, Mass., before the Legislative Commission on Drunkenness, Nov. 24, 1913. Submitted to *Boston Medical and Surgical Journal*.

The following extract is taken from the report of the director of the Psychopathic Department: —

1. The operation of various laws securing temporary care for patients having mental symptoms has saved 665 persons from the stigma and expense of regular court commitment; 726 persons were regular court commitments later.
2. A new stratum in society is being tapped by the hospital, as indicated by the receipt of 250 persons who were later discharged into the community as not insane. This amounts to about one-sixth of the total admissions. Since there were 129 patients thought to be recovered at their discharge, the hospital has been the means of handling successfully, from an economic standpoint, 379 cases, — a little over one-fourth of its admissions. It is probable that many of these would not have resorted to the insane hospital of older type.
3. The establishment of a psychopathic hospital in a community, if it be coupled with appropriate laws favoring ready resort of persons in mental difficulty, is likely to increase the visible financial burden of the State which undertakes the psychopathic hospital plan. But although the possible burden of the State will be a little larger, yet the economic advantage of solving mental problems of many individuals who would never resort to an institution of older type, and of solving problems for psychopaths while they are still willing to make voluntary resort

to an institution like the Psychopathic Hospital, will far more than compensate for the slight extra financial burden. The extension of the psychopathic hospital plan to the rest of the community as well as to other States is accordingly a matter of the no distant future.

4. It is hoped that the Psychopathic Hospital's experience with alcoholic mental disease, which has formed numerically about one-ninth of its problem, will tend to secure better provision for cases of drunkenness and delirium tremens in the community. These do not legally fall within our scope; practically, they do.

5. Some progress has been made toward a *rationale* of hydrotherapy (Adler).

6. Various promising medical and social educational measures have been undertaken, — lectures, formal and informal conferences, daily staff meetings, Wednesday clinics for practitioners, Friday clinics for social workers, publications. The hospital promises to become a powerful engine for the spread of mental hygiene.

7. The out-patient department has proved numerically a success. It is hard to estimate its exact value as a preventorium. But as a means of answering questions raised by social agencies concerning the mental state of various dependents it is clear that the out-patient department is successful.

8. The development of a new scheme for evaluating mental capacity, employing a scale by points instead of an age-scale (Yerkes), is likely to be of value.

9. Developments in the *rationale* of after-care, especially for alcoholics, have been made (Stearns, Jarrett).

10. The need of a new type of nurses' training school, permitting general hospital nurses to develop technique in connection with excitements and deliria, has become clear.

11. Some progress has been made in conveying to physicians a portion of the social point of view and to social workers a portion of the medical point of view. Perhaps we shall in time disarm the suspicion which the people entertain of State agencies. The resort of voluntary cases to the psychopathic department's wards, and of an increasing number of persons to the out-patient department, indicates increased confidence in State institutions.

Worcester State Asylum.

The superintendent, Dr. H. Louis Stick, notes:—

(1) A small but serious epidemic of dysentery (14 cases, with 4 deaths), all on the female side.

(2) Social work by member of medical staff.

(3) Addition of lectures on social work and eugenics to the nurses' training course.

(4) Desirability of a psychopathic hospital in the Worcester district.

(5) Tuberculin tests in cattle every six months.

(6) Desirability of hydriatic apparatus for dealing with various excited cases.

Medfield State Asylum.

The superintendent, Dr. Edward French, notes:—

(1) Persistence of bacillary dysentery.

(2) Desirability of a new building for surgery, dentistry, dispensary work, with a second floor having rooms suitable for isolation in an epidemic.

(3) Desirability of changing the scope of the Medfield institution from that of asylum (for transferred cases) to that of hospital (for receiving fresh as well as transferred cases).

In connection with (2) and (3), it is clear that laboratory facilities will become necessary under the new conditions, as they have been desirable in the past.

Gardner State Colony.

The superintendent, Dr. Charles T. LaMoure, notes: —

(1) An epidemic of 80 cases of influenza, with one fatality, in December, 1912, and January, 1913.

(2) Small epidemics of measles, diphtheria and scarlet fever.

Monson State Hospital.

The trustees note: —

(1) The sending of two assistant physicians to the Psychopathic Hospital for special courses of study.

(2) Research work on inheritance in epilepsy (Miss Kendig).

Foxborough State Hospital.

The superintendent notes the possibility of curtailing in some cases the time of hospital treatment of alcoholics through the development of the out-patient department.

Mental Wards, State Infirmary.

The trustees note progress on the new laboratory building.

The superintendent notes: —

(1) Continuation of salvarsan work in syphilites (230 cases, 441 doses).

(2) Work done by insane patients outside as well as inside their own department.

(3) Broadening of scope of laboratory work to include biochemical work (Abderhalden test for pregnancy, protein metabolism in chronic nephritis).

Massachusetts School for the Feeble-minded.

The trustees note: —

(1) Value of formal psychological tests in cases coming before trustees for discharge.

(2) Work by field workers.

(3) Presence of 40 "defective delinquents."

The superintendent notes:—

- (1) The *undesirability* of a commitment law forcing commitment of each feeble-minded person in the State.
- (2) Desirability of a permanent continued census of the feeble-minded.
- (3) An epidemic of mild diphtheria (49 cases, 1 death), and a small epidemic of scarlet fever (8 cases).
- (4) Opening of the new "infirmary" for 70 cases.
- (5) Thursday out-patient clinics (7 or 8 cases each week).

McLean Hospital.

The superintendent, Dr. George T. Tuttle, quotes from reports of his assistants:—

- (1) Selected character of McLean material with consequent statistical figures differing from those of State institutions.
- (2) McLean opinion to the effect that the so-called "infective-exhaustive" psychoses belong chiefly in the manic-depressive group, to a lesser extent in the acute delirium group.
- (3) Talks to junior assistants on applied psychology.
- (4) Conclusion of certain psychological investigations and beginning of others; (a) association-method applied to psychoses; (b) associations and traits of personality.
- (5) Work begun on effort to quantitate estimates of personality along lines of Hoch and Amsden.

Papers have been published as follows:—

Dr. Abbott: "Psychology and the Medical School." *American Journal of Insanity.*

Mr. Erdmann: "A Method for determining the Surface Tension of Liquids for Biological Purposes." *Journal of Biological Chemistry.*

Miss Jones:

"Some Problems of the Institution Library Organizer in the State Hospitals." *American Library Journal.*
"Thousand Books for the Hospital Library" (Jones and Carey).
American Library Association.

Mr. Wells:

Original articles: "Practice and the Work-curve." (The *American Journal of Psychology.*) "The Advancement of Psychological Medicine." (The *Popular Science Monthly.*) "The Principle of Mental Tests." (Science.) "On Formulation in Psychoanalysis." (The *Journal of Abnormal Psychology.*)

Reviews and general summaries: "The Experimental Pathology of the Higher Mental Processes." (The Psychological Bulletin.) Parmelee's "The Science of Human Behavior." (The Psychological Bulletin.) Freud's "The Interpretation of Dreams, Brill's Translation." (The Journal of Philosophy, Psychology and Scientific Methods.) "Dynamie Psychology." (The Psychological Bulletin.)

SCIENTIFIC WORK OF BOARD.

Of work having a general scope before the appropriation for expenses was made, the following may be mentioned (see annual reports of State Board of Insanity, 1909, 1910):—

1. *Nature and Causes of Mental Disease beginning between Fifty and Seventy Years of Age* (Southard and Mitchell). — Proof was brought that neither wasting of the brain substance nor damage done by diseased blood vessels is responsible for the mental disease in a good proportion of cases. Alterations in the nerve cells and in the interstitial cells were found, giving rise to the hypothesis of a disorder of cell metabolism in these cases⁽¹⁾.

2. *Nature and Causes of Senile Dementia* (Southard). — A special group of cases (termed "senile atrophic dementia") was separated out from the arteriosclerotic and functional cases of mental disease in the aged. Evidences of active and progressive destruction of nerve cells were found in these brain-wasting cases. Attention was called to the fact that in some cases the brain suffers wasting along with all other viscera, but that in some cases the wasting affects the brain and spares the other organs. The causes of the two affections are possibly separate⁽²⁾.

3. *Errors in the Diagnosis of General Paresis* (Southard). — This study was undertaken before the usage of the Wassermann reaction for detection of syphilis, and showed an error of 10 to 15 per cent. in the diagnosis. This result has medico-legal importance, and emphasizes the necessity of Wassermann serum and cytological tests which have now greatly reduced the error. The special nature of those cases in which errors were made was described (cerebellar, arteriosclerotic, etc.)⁽³⁾.

4. *The Margin of Error in the Diagnosis of Mental Disease*. — Ten cases in 250, or 4 per cent., were found obscure even after autopsy (Southard⁽⁴⁾), although the problems in these 10 were later to some extent cleared up (Alford⁽⁵⁾). The causes in these obscure cases and in many cases in which the clinical diagnosis was proved erroneous were found to be infectious, toxic, somatic, non-

nervous (*e.g.*, streptococcus septicemia, streptococcus meningitis, cerebellar abscess). This work was of importance in prescribing work for the Psychopathic Hospital. The series showed that where all diagnosticians came to agreement the percentage of accuracy was about 9 in 10; that where there was disagreement somebody proved to have been correct in about 3 out of 4 cases; and that every diagnostician was in the wrong in about 7 per cent. (17 cases) of the 250 cases.

5. *The Nature and Causes of Dementia Praecox.*—The organic nature of this disease was supported by the observation of gross or microscopic lesions in 86 per cent. of the unselected series investigated. The necessity of studying the anomalies and scleroses in these brains from a topographical point of view was shown. These results have prescribed much of the photographic and anatomical work since done under the appropriation (see below). The issue between the "mind twist" or psychogenic hypothesis and the "brain spot" or encephalogenic hypothesis came out clearly in the discussion of these findings at the Triennial Medical Congress, Washington, 1910⁽⁶⁾.

6. *Geographical Variations in the Distribution of Insanity.*—Two studies have been completed: (a) as to towns⁽⁷⁾, (b) as to cities⁽⁸⁾. Surprising variability was found, more in the towns than in the cities. A rough correspondence was found to hold between the insanity rates (commitments) and the census rates (enumerations in 1905) of defectives, physical and social. The correspondence is closer between the rates for insanity and those for physical defectives.

Special Investigations under the Appropriation.

7. *The Nature and Causes of Epilepsy and Imbecility.*—The recent work on heredity, some of which had been done at Monson Hospital, working with the Eugenics Record Office, Cold Spring Harbor, Long Island, has tended to throw discredit on special causes such as infectious disease. This problem was attacked (Lucas and Southard) from the other end: the after-history of children who had apparently recovered from poliomyelitis was followed. Proof was brought that cases of epilepsy could develop subsequently to such attacks of infectious disease⁽⁹⁾⁽¹⁰⁾. The heredity of these particular cases is now under investigation by a eugenics worker at the Psychopathic Hospital.

8. *The Nature of Such Mental Disease as is Consistent with Normal or Normal-looking Brains.*—Statistical studies were made

on Worcester Hospital material⁽¹¹⁾. Previous results concerning the absence of evident brain damage in senile dementia (Danvers material, see paragraph 2 above) were confirmed with the Worcester material. The possibility was made out that there are two groups of dementia *præcox* cases, — a group subject to early death (often under two years), and a far more viable group dying, as a rule, at various ages eight or more years after onset. One brain in three was found to look normal in the Worcester series as against one in about four in the Danvers series. The problem of the normal-looking brains in psychopathic subjects is of great importance, because the normal appearance of such a brain means either finer and largely non-destructive changes or else that the causes of the insanity in question reside outside the brain⁽¹²⁾.

9. *The Relation of Mental Diseases and Defects to Syphilis.* — Special work has been done with the Wassermann test to establish the percentage of syphilitics in various groups of patients (Worcester Asylum, 5 to 6 per cent.). The Essex County (Danvers) percentage of cases as received goes as high as 22 per cent. (study by H. L. Paine). The Psychopathic Hospital has occasionally received as high as 30 per cent. in a given month. Three special pieces of work are in progress as to the relation of syphilis to mental disease: (a) Dr. A. Myerson of the Psychopathic Hospital staff is testing the merits of the Homer Swift treatment of general paresis by injections of salvarsanized serum into the cerebrospinal sheath. Progress in this work will be reported in the Notes on the Annual Conference for the Psychopathic Hospital⁽¹³⁾. (b) Dr. W. P. Lucas, formerly chief of the out-patient staff of the Psychopathic Hospital, is to report shortly on the general relations of the Wassermann reaction for syphilis to medicine, with special relation to mental disease. This paper will appear in the "Boston Medical and Surgical Journal" as one of the State Board of Insanity Medical Contributions⁽¹⁴⁾. (c) It is contemplated, as material accumulates, to supplement the work mentioned under paragraph 3 above (errors in the diagnosis of general paresis) with statistical work on autopsied cases, showing the exact degree of improvement in diagnosis which has followed the introduction of the Wassermann method.

10. *Nervous Diseases of Children and their Bearing on Mental Defect.* — Lucas' work on congenital syphilis is one of great importance here⁽¹⁵⁾. Boston City Hospital and Massachusetts General Hospital data, owing to the courtesy of the directors of their laboratories, have also been collected and given a preliminary analysis

(N. K. Wood). This work will be published in due time, together with some studies of brain weight in children having a bearing on the effects of acute nervous disease.

11. *Brain Weights in Normal and in Insane Subjects.*—To compare with insane hospital data, the data concerning brain and other visceral weights from two large general hospitals (Boston City Hospital and Massachusetts General Hospital) have been collected and partially analyzed. Some data concerning spleen weights have been utilized by Dr. H. M. Adler, chief of staff of the Psychopathic Hospital, in his studies of the relation of the lymphoid apparatus, fat absorption, and insanity⁽¹⁶⁾. Data concerning a ratio termed the brain-trivisceral ratio (brain weight compared with combined weights of heart, liver, and kidneys) have been already published by Burns⁽¹⁷⁾ (relation of brain weight to cancer), and have also been utilized in developing a conception of differential brain atrophy (atrophy of brain without similar atrophy of other organs, paragraph 2, *supra*).

12. *Anatomy of Mental Disease—Statistical Studies.*—Extensive tabulations of anatomical findings in mental disease, establishing tentative ratios of the normal to abnormal brains (appraised by available methods), have been made (see paragraph 8, *supra*). Use has been made of accumulated results in several publications (Southard⁽¹⁸⁾) and in directing research at the findings in the remainder of the body in normal-brain cases. It has been hoped thereby to clear the field for a study of mental disease, not attended by brain disease, if, as seems likely, there is such a group. Attention would thus be leveled upon the glands of internal secretion and other body organs.

13. *Anatomy of Mental Disease—Photographic Studies.*—The most expensive and time-consuming investigation as yet undertaken under the State Board of Insanity fund has been the photographic and dissection work with brains. The brains studied now amount to about 500. The photographic work has been systematic and uniform and permits a record of appearances, both before and after stripping the pia mater in the formalized brain, of the superior, inferior, left and right lateral, and left and right mesial surfaces. The work has been under the general supervision of the pathologist to the State Board of Insanity; the arduous dissection has been performed by Dr. Annie E. Taft, custodian of the Harvard Neuropathological Collection, and appointed special investigator under the State Board of Insanity; and the photographic work has been done almost exclusively by Mr. Herbert W. Taylor.

The work has been performed in the various laboratories from which the brains are derived, and to which they are returned for safe keeping, and in the neuropathological laboratory of the Harvard Medical School. The brain photographs include, besides many from brains of the insane, photographs from 50 Monson State Hospital brains (epileptic) and a smaller number from the medical examiner of Suffolk County, Dr. George Burgess Magrath. A variety of studies, both qualitative and encephalometric, is being made from this collection (see next paragraph for example).

14. *Anatomy in Dementia Praecox.* — The photograph collection mentioned in the previous paragraph has been utilized most intensively so far in the study of dementia praecox. In the prosecution of this study, made on Danvers State Hospital material (a continuation of work mentioned under paragraph 5, *supra*), frontal sections have been made and a photographic record taken of a sufficient number of the surfaces of section. From a combined study of the surface and section appearances, the sites of most extensive or markworthy lesions and anomalies are mapped, and histological work is then carried out upon these areas and their fellows in the opposite hemisphere. In this way rapid entrance is effected into the problem of topical variations in the degree of destructive process going on. These topical variations will in future permit, or lay the basis for, an analysis of the correlation of structure and function in this most important group of mental diseases. The first results have been presented at the Triennial Congress of Physicians and Surgeons before the American Neurological Association at Washington, D. C., 1913, and at the International Medical Congress at London, Eng., 1913, and will be shortly published in this series of medical contributions⁽¹⁹⁾. An extension of the work to manic-depressive insanity, and other obvious extensions, will be carried out as time permits.

REFERENCES.

1. Southard and Mitchell: "Clinical and Anatomical Analysis of 23 Cases of Insanity arising in the Sixth and Seventh Decades, with Especial Relation to the Incidence of Arteriosclerosis and Senile Atrophy and to the Distribution of Cortical Pigments." Am. Jour. Insanity, Vol. 65, No. 2, October, 1908.
2. Southard: "Anatomical Findings in Senile Dementia: A Diagnostic Study bearing especially on the Group of Cerebral Atrophies." Am. Jour. Insanity, Vol. 66, No. 4, April, 1910.
3. Southard: "A Study of Errors in the Diagnosis of General

Paresis." *Jour. Nervous and Mental Disease*, Vol. 37, No. 1, January, 1910.

4. Southard: "The Margin of Error in the Diagnosis of Mental Disease: Based on a Clinical and Anatomical Review of 250 Cases examined at the Danvers State Hospital, Massachusetts, 1904-08." *Charles Whitney Page Series* (1910. 2). *Boston Med. and Surg. Jour.*, Vol. 63, No. 5, August, 1910.

5. Alford, L. B.: "Ten Obscure Cases of Mental Disease: A Clinical and Anatomical Study." *Ibid.* (1910. 4).

6. Southard: "A Study of the Dementia *Præcox* Group in the Light of Certain Cases showing Anomalies or Sclerosis in Particular Brain Regions." *Ibid.* (1910. 3); also *Am. Jour. Insanity*, Vol. 67, p. 1, July, 1910.

7. Southard: "Note on the Geographical Distribution of Insanity in Massachusetts, 1901-10." *Boston Med. and Surg. Jour.*, Vol. 166, No. 13, March, 1912; also *American Breeders' Magazine*, Vol. 3, 1912.

8. Southard: "Second Note on the Geographical Distribution of Insanity in Massachusetts, 1901-10" (in press). *Boston Med. and Surg. Jour.*; also "Translations of the Fifteenth International Congress of Hygiene and Demography" (in press).

9. Lueas and Southard: "Contributions to the Neurology of the Child: I. Report on Convulsive Tendencies during and after Encephalitis in Children." *Boston Med. and Surg. Jour.*, Vol. 166, No. 19, February, 1912.

10. Lueas and Southard: "Contributions to the Neurology of the Child: III. Further Observations upon Nervous and Mental Sequelæ of Encephalitis in Children." (Submitted to) *Boston Med. and Surg. Jour.*, 1913.

11. Southard: "A Series of Normal-looking Brains in Psychopathic Subjects," *Hosea Mason Quinby (Worcester State Hospital) Series*, 1912-13. 11. *Am. Jour. Insanity*, Vol. 69, No. 4, April, 1913.

12. Southard: "Psychopathology and Neuropathology: the Problems of Teaching and Research contrasted." *Am. Jour. Psychology*, 23, April, 1912; also a "Symposium on the Relations of Psychology and Medical Education" (Franz, Meyer, Southard, Watson, Prince). *Jour. A. M. A.*, Vol. 63, March, 1912.

13. Myerson: "Notes on Progress with the Treatment of General Paresis by Salvarsanized Serum" (in press). *Boston Med. and Surg. Jour.* (*Psychopathic Hospital Contributions*, 1913).

14. Lueas: "The Relation of the Wassermann Reaction to Medicine and Psychiatry" (in press). *Boston Med. and Surg. Jour.*, 1913. (Contributions from the State Board of Insanity, Massachusetts, 1913. 2).

15. Lueas: "Contributions to the Neurology of the Child: II. Note on the Mortality and the Proportion of Backward Children in Cases of

Congenital Syphilis followed Subsequent to Hospital Treatment." Boston Med. and Surg. Jour., Vol. 167, No. 9, August, 1912.

16. Adler: "Some Effects of overfeeding with Fats in Certain Cases of Insanity." Charles Whitney Page (Danvers State Hospital) Series, 1910. 17. Boston Med. and Surg. Jour., Vol. 163, No. 5, 1910.

17. Burns: "Note Concerning Brain and Other Visceral Weights in Sixty-six Subjects showing Carcinoma or Sarcoma." *Ibid.* (1910. 16).

18. Especially see publications mentioned under notes 11 and 12.

19. Southard: "On the Topographical Distribution of Cortex Lesions and Anomalies in Dementia Praecox, with Some Account of their Functional Significance" (to be submitted to the Am. Jour. Insanity, amplified from paper read at Washington before Am. Neurol. Asso., 1913).

To sum up the report of the pathologist for the year 1913:—

1. A brief analysis is offered of departmental progress in the last five years.

2. Arguments for extending the special work of the department are presented, especially concerning: (a) Making the Psychopathic Hospital a still more effective investigation station for work on the nature, causes, results, and treatment of insanity and allied defects; (b) taking over the functions of a central laboratory for syphilis tests (Wassermann); (c) appointment of an assistant to the pathologist.

3. A summary is presented of special State Board work of investigation done before and after the apportioning of special funds for investigation (1911).

4. Special work in the institutions may be particularly selected for mention as follows:—

(a) Dysentery and fly problem continued (S. T. Orton, Worcester).

(b) Organization of clinical directorate (A. Myerson, Taunton).

(c) Prevention of a diphtheria epidemic (Danvers).

(d) Fifth decade insanities (Bond and Southard, Danvers).

(e) Remissions in general paresis (Paine, Danvers).

(f) Correlation of lesions with symptoms in general paresis (Southard and Tepper, Danvers).

(g) Spleen in insanity (Adler, Danvers).

(h) Amyloid degeneration (S. C. Fuller, Westborough).

(i) Calcarine cortex in cases with *Affenspalte* (S. C. Fuller, Westborough).

(j) Inheritance of epilepsy (Kendig, Monson).

(k) Normal-looking brains (Canavan, Boston).

- (l) Bacteriology of cerebrospinal fluid (Canavan, Boston).
- (m) Treatment of delirium tremens (staff of Psychopathic Hospital).
- (n) Hydrotherapy and concentration of blood in cases of excitement (Adler and Ragle, Psychopathic Hospital).
- (o) Test of Swift-Ellis treatment of paresis by salvarsanized serum (Myerson, Psychopathic Hospital and Taunton).
- (p) Consensual amyosis to blue light (Myerson and Eversole, Psychopathic Hospital).

Respectfully submitted,

E. E. SOUTHARD,
Pathologist.

PROGRESS IN PSYCHIATRY.

The psychiatric institutional developments in other States, as well as in Europe, have an important bearing upon our own progress, to which end section 5, chapter 504, Acts of 1909, requires "information embodying the experience of this country and other countries relative to the best and most successful methods of caring for such persons as come under the supervision of the board." In partial compliance with this provision the following notes are offered:—

A notable International Congress of Physicians was held in London in September, 1913. This congress was of interest rather from the scientific side than from the side of care of patients. However, an important review of the functions of psychiatric clinics and psychopathic hospitals (Sommer of Gießen, Meyer of Baltimore, and others). There was an elaborate discussion of psychoanalysis (Janet, Jung, and others), the issue of which was not decisive; but a true decision of this issue would be of the greatest institutional importance, for a true decision would go far to settle whether we need public institutions for psychoneurotics or had better leave them in the general population. (See notes below as to beginnings in the direction of preventoria.) Other features of the London Congress were inspections of institutions for the insane under the London County Council (important demonstrations by Dr.

F. W. Mott at Claybury Asylum) and of a new institution at Cardiff, Wales.

The development and planning of new psychiatric clinics and psychopathic hospitals go on apace. Clinics in the modern elaborate sense have been opened in Königsberg and Baltimore.

There are signs that an era of small district hospitals is approaching. Lergijewsky has advocated these (120 to 160 beds) for Russian districts to secure first-hand and early contact with cases in the community and to permit ready out-patient treatment. Meyer has advocated districting for somewhat similar purposes in Maryland. In Massachusetts this movement would probably be actively abetted by establishing out-patient departments for mental cases in connection with State hospitals, sometimes better in large cities near such hospitals.

The size of hospitals is still a subject of controversy. To be sure, all are united in the belief that small hospitals are good, and that perhaps their only drawback is that proper scientific arrangements will not be made in small units. This argument is not sound as regards scientific instruments, since a proper equipment is not expensive and maintenance small. But, as regards scientifically minded officers, the argument does have some weight as against multiplied small units.

Some authors advocate hospitals of 4,000 beds and over (Hickel) or of 2,000 for chronic material (Weygandt). It is probably safe to say that a unit of over 500 is too large for a good hospital superintendent to control, if he is to have medical control in the sense of diagnosis and treatment, and that such a unit of 500 might properly require three subordinate physicians in addition to the superintendent. A hospital of 1,000 beds would probably require two leaders of superintendental rank and salary, and for every additional service of 500 patients another such well-trained chief of service. Such a plan would not be particularly economical, as compared with schemes now in various States. But an arrangement which gives every 125 patients to the charge of a physician fits the average prevalent in Germany. It is not extravagant to hope that every fourth man in charge of such a ward or service of 125 patients

should be a more experienced and better-grounded man. The larger units of 500 patients thus arrived at may or may not be associated together in major units for economic purposes. On some such grounds as these, we believe, the advocates of large and small hospitals for the insane could come together.

The most interesting and novel side of the literature of institutional care for the insane relates to the development of special hospitals for psychoneurotics. It will be remembered that a Massachusetts commission some years ago decided that this State should not enter this field.

In German-speaking countries, however, such developments have been rapid, though various. The Nathaniel Rothschild Foundation has begun with a sanatorium for indigent nervous cases at Rosenhügel, near Vienna. At Naunhof, near Leipzig, there is a 50-bed hospital (soon to be increased to 100 beds), 80 per cent. of whose patients are neurasthenics (treatment four to eight months). At Essen is the somewhat similar Luhrmann Foundation (30 patients). Sometimes the government establishes these institutions, sometimes private philanthropy, sometimes insurance interests. In 1914-15 there is to be built in Baden a sanatorium for nervous cases (government aid and private subscription).

The Bergmann Institute (on a plan proposed by Windscheid) has 100 beds for occupational nervous disorders. There were 1,533 admissions in 1912 (average treatment one month). The conclusions of the expert examiners here were confirmed in the courts in 94.6 per cent. cases.

Frankfurt-am-Main is completing in the suburban Taunus Mountains a hospital with 154 beds for alcoholics and 48 for nervous cases.

Public rest stations are advocated by Sommer after a plan introduced by him at the Dresden Exposition of 1911.

An unusually elaborate family-care system seems to have developed around municipal institutions in Dresden. There has been further discussion of the Scotch boarding-out system. The Gheel system of boarding out with a small central plan has been developed at Ilten, Jerichow, Eberswalde, as well as, of course,

in France. There have been some developments in family care in the neighborhood of large institutions; such an arrangement at Dalldorf, in Germany, is mentioned.

An observation or transitional station for children and adolescents has been established near Munich.

The mental hygiene movement in America deserves commendation. A number of State societies have been developed. There is a strong movement for a national department of mental hygiene in connection with the public health service. It would seem that, for the present, there is room both for private and for public work in mental hygiene. The Psychopathic Hospital in Boston has stimulated the voluntary resort of greatly increased numbers of mental patients, to say nothing of the temporary care of those suspected of mental derangement. Partly as a result of these two increasing groups (voluntary and temporary-care groups) it is now possible to state that 570 of the first 2,500 discharges from the Psychopathic Hospital were "not insane." Such arrangements are concrete portions of the prophylactic division of mental hygiene.

In connection with chapter 395, Acts of 1911, and possible ambulance developments, it would be well to call attention to the provisions for ambulance service as instituted in New York (part of section 4, chapter 87 of the Consolidated Laws, New York) :—

It shall also be the duty of such trustees of Bellevue and Allied Hospitals, . . . to see that the proceedings are taken for the determination of the mental condition of any such person in the boroughs or county mentioned, who comes under their observation or is reported to them as apparently insane, and, when necessary, to see that proceedings are instituted for the commitment of such person to an institution for the care of the insane; provided that such report is made by any person with whom such alleged insane person may reside, or at whose house he may be, or by the father, mother, husband, wife brother, sister or child of any such person, or next of kin available, or by any duly licensed physician, or by any peace officer, or by the representative of any incorporated society doing charitable or philanthropic work. When the trustees of Bellevue and Allied Hospitals are thus informed of an apparently insane person, residing in the boroughs of Manhattan or the Bronx, . . . it shall be the duty of these authorities . . . to send

a nurse or a medical examiner in lunacy attached to the psychopathic ward of their institution, or both, to the place where the alleged insane person resides or is to be found. If, in the judgment of the chief resident alienist of the psychopathic ward or of the medical examiner thus sent, the person is in immediate need of care and treatment or observation for the purpose of ascertaining his mental condition, he shall be removed to such psychopathic ward for a period not to exceed ten days, and the person or persons most nearly related to him, so far as the same can be readily ascertained by such trustees . . . shall be notified of such removal.

The opinion of the corporation counsel of the city of New York regarding the interpretation of this same section is also appended and is as follows:—

The obvious purpose of section 87 is to sanction and permit the summary removal to the hospital of alleged insane persons who, by their actions, evince symptoms of insanity, or whose conduct, in the judgment of the medical examiner sent pursuant to its provisions, is such that it would be dangerous to themselves or to the community to allow them to remain unrestrained or would disturb the public peace, but to afford alleged insane persons in whose cases these elements of danger or disorder are lacking, opportunity to be heard before depriving them of their liberty.

In this view, I am of opinion and advise you that it is not contemplated or required by section 87 that a person alleged to be insane should be forcibly brought to the hospital, unless such person has acted in a disorderly manner, has committed an overt act or is apparently an immediate source of danger to himself or to the community, and that in other cases, recourse should be had to that provision or section of section 87 which reads as follows:—

Whenever in the city of New York an information is laid before a magistrate that a person is apparently insane, the magistrate must issue a warrant directed to the sheriff of the county in which the information is made, or any marshal or policeman of the city of New York, reciting the substance of the information and commanding the officer forthwith to arrest the person alleged to be insane and bring him before the magistrate issuing the warrant.

TRAINING SCHOOLS.

The 11 institutions, out of 13 caring for the insane, which maintain training schools for nurses are active in their efforts to maintain and raise the standards.

The training is now compulsory for both men and women in three schools; compulsory for women in five; and elective for

women in three. Efforts to enlarge the opportunities by supplemental affiliations with general hospitals or lying-in hospitals continue, and the including of practical instruction in occupations and industries has made some of the courses more valuable to hospital, patient, and nurse.

Almost every institution ends the year with requests for more complete and satisfactory accommodations for married nurses and attendants, thus materially adding to the stability of service and immeasurably strengthening the nursing force by the retention of good supervisors, head nurses, and teachers.

It is interesting to note that difficult as progress is under the existing conditions, Massachusetts stands high among the States where progressive efforts to refine and perfect the care of the insane in her institutions have been made.

Inquiry was made in May, 1913, of the various State boards as to the number of institutions for the insane conducting training schools for nurses. Thirty-one different States replied. Of these, 23 reported training schools and 8 none.

In these 23 States there is a total of 158 institutions for the insane, 72, or 46 per cent., of which had training schools. Iowa, with 4 institutions, Kansas, with 3, Connecticut, with 2, and Rhode Island, New Hampshire, South Dakota, and District of Columbia, with one each, have training schools in each institution.

In Illinois, 89 per cent. of 9 institutions for the insane have training schools.

In New York, 87 per cent. of 16 institutions for the insane have training schools.

In Massachusetts, 85 per cent. of 13 institutions for the insane have training schools.

In Michigan, 67 per cent. of 6 institutions for the insane have training schools.

In Nebraska, 67 per cent. of 3 institutions for the insane have training schools.

In Minnesota, 60 per cent. of 5 institutions for the insane have training schools.

In Ohio, 56 per cent. of 7 institutions for the insane have training schools.

In Kentucky, 50 per cent. of 4 institutions for the insane have training schools.

In Vermont, 50 per cent. of 2 institutions for the insane have training schools.

In Missouri, 50 per cent. of 4 institutions for the insane have training schools.

In Virginia, 50 per cent. of 4 institutions for the insane have training schools.

In New Jersey, 38 per cent. of 8 institutions for the insane have training schools.

In North Carolina, 33 per cent. of 3 institutions for the insane have training schools.

In Oklahoma, 33 per cent. of 3 institutions for the insane have training schools.

In Pennsylvania, 28 per cent. of 29 institutions for the insane have training schools.

In Maryland, 25 per cent. of 4 institutions for the insane have training schools.

In Wisconsin, 8 per cent. of 36 institutions for the insane have training schools.

In 8 States, — Iowa, Kansas, Illinois, New York, New Jersey, Missouri, Oklahoma, and Pennsylvania, — in those institutions that maintain schools, the course is compulsory for both men and women. In 6 — Connecticut, District of Columbia, Kentucky, Maryland, Wisconsin, and Vermont — it is elective for both men and women. In Rhode Island, Nebraska, Minnesota, and Ohio it is compulsory for women only, while in Massachusetts and Michigan the option of joining the school varies in different institutions. Illinois reports that only the first year of instruction is compulsory for all attendants, but after that continuance in the training school course is optional, and as a result but few graduate. In one hospital in Connecticut, also, a three months' course is compulsory, and after that optional. Wisconsin reports that there are no graduates from the schools in hospitals for the insane, but that after a two years' course in one of these schools pupils take one year in a general hospital, and are graduated by the general hospital.

One State reports such difficulty in maintaining a training school in the hospital for the insane that it had to be given up. These difficulties were: "The work had to be done at night, and the long hours met with objections from every one who did not propose to follow the work up, and we found it impossible

to keep it up successfully. Of later years we have been trying to pick out a few attendants of rather high quality for special training. . . . One other feature that has made it difficult for us to carry on training schools is our comparatively small number of physicians."

The necessity and advantage of some kind of systematic training for attendants are agreed upon by the interested authorities in all of the States where such has been instituted, and is recognized by others who have not yet been able to institute the work. There is apparently a great diversity of opinion as to how much instruction is necessary or desirable for attendants, and also as to the value of a diploma from a school in a hospital for the insane. Some believe that attendants should be trained for their value to the hospital alone, others that their training should be sufficiently comprehensive to warrant their ranking in the community as trained nurses, on equal footing with those from general hospitals. An interesting discussion of the value and methods of training schools will be found on page 190 in the record of one of the semi-annual conferences between the State Board of Insanity and the superintendents and trustees of the various institutions of Massachusetts.

The value of training schools for men is universally recognized, but the difficulty of finding men interested enough to pursue such a course is very great, and the career of a male nurse in this specialty of private work is not assured. Nevertheless, the necessity of procuring better equipped men attendants, especially as supervisors, assistant supervisors, charge attendants and night supervisors, is so great and of such vital importance to the attainment of the best ideals for the care of the insane, that every reasonable effort to this end should be encouraged. Such efforts should include systematic instruction of adequate thoroughness; compensation commensurate with the responsibility assumed and service rendered for graduates retained in the service; arrangements for life outside of the hospital buildings; and shorter hours of employment. Progress in these lines will do much, and is doing much, to make the care of the insane in our institutions satisfactory.

OCCUPATION AND DIVERSION.

The supervision of instruction of patients and nurses in various kinds of occupations was continued by Dr. Neff until she resigned her duties in February, 1913. Her successor, Miss Emily L. Haines, was not appointed until the fall, and began her work just before the close of the fiscal year in November, 1913.

The State Industrial Exhibit, which had visited Medfield, Westborough, Taunton, Danvers and Boston hospitals and Worcester Asylum, continued its rounds, and was shown at Worcester, Monson and Northampton hospitals, Gardner Colony, and the State Infirmary. This exhibit appears to have served the double purpose of stimulating occupations in the institutions and of educating the people in the community in their knowledge of the character of the hospitals and the methods employed within them.

At the Boston State Hospital there is an occupational instructor who, with an assistant, has charge of the work on the wards and in the industrial room. In the male department there are 2 paid instructors, and 1 nurse who gives all his time to industrial work. Each nurse spends one month in the industrial room, as a part of her training.

At the Danvers State Hospital there are 2 paid occupational instructors, while each nurse spends one month in the industrial room.

At the Taunton State Hospital an assistant physician has charge of the occupational work. There are 3 men instructors. The superintendent of nurses directs 7 supervisors, who conduct classes of patients in different kinds of work. Instruction is given in basketry, etc., in the training school by the superintendent of nurses.

At the Worcester State Hospital there are 2 occupational instructors, one for women and one for men.

At the Worcester State Asylum there are 3 occupational instructors, one at Grafton Colony, and two at the asylum, one for men and one for women.

Westborough and Monson State hospitals each have one occupational instructor.

At the Medfield State Asylum there are 5 instructors. It is planned to give instruction to the nurses in hand work, but this has not yet been made obligatory. The instruction at first will be largely in the theory of occupation for patients, with a list of various industries, and their adaptability to asylum purposes.

It is the purpose of the present State supervisor to have, in every hospital, a director of occupational therapy, who will direct both the occupation work and the diversion of the patients.

The plan of organization is briefly as follows:—

The work of the industrial room should be under an instructor, who is under the supervision of the director. The work on the wards should be under the immediate instruction of a nurse in charge. She should be responsible for the materials left by the director, and should be responsible for the work of the patients.

The director should have oversight of the work on the wards, and see that the nurse has the proper materials and work for each patient. She should give instruction in various kinds of handicraft to the nurses. Each nurse, during her training, should have one month's experience in the industrial room.

Patients of kindergarten mentality should be kept occupied by kindergarten methods.

Games and music should break up the periods of work, and so prevent the flagging interest and fatigue which comes from monotony or too prolonged application.

CASUALTIES.

A considerable number of casualties have been reported to the Board by the superintendents of institutions under its supervision. Many of these were of minor importance and some of a serious nature. These reported cases do not represent a basis for criticism of the institutions from which they are reported, because it has not been possible to clearly designate just what must and what need not be reported. Manifestly, if the requirement for reporting a given casualty depends on its gravity, there will be a difference of opinion in a large number of instances as to the necessity of filing a report.

One hundred and fifty-six cases were reported. Forty-eight per cent. of these happened when the patients were alone, 42 per cent. involved others (either fellow patients or employees), and 10 per cent. were undetermined. One hundred and thirty-five cases were of known origin. Of these, 12 were suicides, 17 were sudden deaths without suspicion of violence, 1 was too trivial for consideration, and 105 were injuries of greater or less severity of known cause.

An analysis of the injuries from known causes shows that 33 per cent. resulted from contact with fellow patients; 24 per cent. resulted from falls (unassisted); 20 per cent. resulted from contact with attendants or nurses; 4 per cent. resulted from epileptic seizures; 20 per cent. resulted from various causes, as follows: 6 cases from accidental or self-inflicted wounds; 2 cases from scalding; 1 case from exposure to weather; 2 cases from ball-playing; 3 cases from working out of doors; 2 cases from jumping from windows; 1 case from burn from steam pipe; 2 cases from choking by food while eating; 1 case from mistake in medicine.

In 35 per cent. of these 105 cases the responsibility appeared to lie with the patient himself.

In 30 per cent. it was placed on a fellow patient.

In 23 per cent. it was placed definitely on the attendant or nurse.

In 12 per cent. it was not definitely placed.

A study of the ages of the patients gives no special light on the subject. The ages ranged from six to ninety years, and 21 per cent. were over sixty years of age.

A larger number and better grade of attendants would contribute toward the prevention of some of these casualties; but even so, there would still be accidents. Many other elements in the situation are contributing factors, and among the means of prevention we believe should be mentioned the following: larger opportunity for hydrotherapeutic treatment; better facilities for employment and diversion in light, attractive and uncrowded rooms; increased medical supervision to enable greater attention to individuals; and smaller units for housing, which will permit of better classification.

A brief account of some of the reported casualties of the year follows. This office has sent many of these accounts to each of the superintendents soon after the occurrence, in the hope that a study of them might stimulate thought as to means of preventing in one institution what had already happened in another.

A male patient at the Worcester State Hospital, suffering from his second attack of manic-depressive insanity in the excited phase, was noticed to be unwell. He was feverish. Tubercular bacilli were found in sputum. There were signs of trouble in the chest, but no injury could be found. Two more examinations were made on the following day, and only on this second examination was a fractured rib detected, with no mark on the surface. The patient died three days later.

A most searching examination was made by the hospital authorities, by an agent of the State Board of Insanity, and by the State police. No definite placement of responsibility could be made. He had special nurses, both night and day, during his whole period of hospital residence. He was exceedingly active, excited and bizarre in his conduct. There were two short intervals when he was left alone.

The probability of injury from his own senseless activities, or of contact with another patient, seems the most plausible explanation.

A male patient at the Worcester State Hospital, suffering from general paralysis, had an acute retention of urine, requiring the use of catheter. He was confused, euphoric and restless, and difficult to keep in bed. He was found to have a severe cystitis and symptoms of a general septic infection, but eight days later, after blood had appeared in his urine, he appeared to be in pain and an examination showed fracture of several ribs on each side. His body showed no signs of bruises or marks of violence of any kind. He died two days after the fracture was noticed. The autopsy showed the usual changes of general paralysis, fractures of twelve ribs, unusual brittleness of the ribs, chronic infection of the bladder, and a general septicaemia.

A most searching inquiry was made as to the cause of this injury by the hospital, the State Board of Insanity, and the

State police. A senile, demented man on the ward accused one of the attendants, who denied violence.

There was evidence that the patient had fallen several days previous, when he was catheterized, and it was necessary for two attendants to assist in holding him. The supposition is that the injury was caused by crush of the chest, but it was impossible to get any direct evidence of the cause. Outside of the suspicion created by the testimony of the demented patient there was no reason to suspect any attendant.

A male patient at the Taunton State Hospital, while eating his breakfast, attempted to thrust his fork into his throat, apparently with suicidal intent. He did but slight damage, and the abrasions were promptly attended to with antiseptic precautions. Septic infection, however, followed, and five days later the patient died. No autopsy was held on account of the objections by the family.

He had never previously given any evidence of suicidal intent.

A male patient at the Northampton State Hospital, sixty-five years of age and feeble-minded, while eating his dinner, choked with a piece of beef in his throat. The nurse promptly went to his assistance, but being unable to relieve him, telephoned for the physician, who came promptly and removed the obstruction. The patient was, however, cyanotic, and respiration could not be re-established.

He was not one of the feeblest patients, and had always been able to masticate the regular diet, so that it had not been necessary to confine him to the soft foods, as is done with the feeble patients.

A senior nurse at the Danvers State Hospital was bathing a female patient. She was assisted by two other patients. While the nurse was drawing the water for the bath, a blind patient in the next room called for assistance. Knowing the urgency of the call, the nurse went to her relief, but left her key to the hot-water faucet in the tap, and the water running. During her absence, from three to five minutes, the patients who were assisting in the bathing put the patient into the tub. The superintendent of nurses, happening to pass through the ward, noticed the patients alone, giving a bath without the

supervision of the nurse. She immediately investigated, found the water of a dangerously high temperature, and removed the patient. The nurse acted in direct opposition to orders and rules, with which she was well acquainted. She was discharged.

The patient, who was a general paralytic, died two days later. The matter was reported to the District Attorney, but no action was taken. The superintendent reported, shortly after, that changes had been made in the hot-water system, whereby the temperature is controlled by a thermoregulator.

A female patient at the Danvers State Hospital, probably with dementia praecox of long duration, was cared for in one of the colony buildings. She was quiet, apathetic, indifferent, rarely spoke, and usually sat in one place most of the day. She made no trouble, was difficult to get out of doors, and showed no tendency to wandering away or to escape.

One morning, soon after breakfast, she was missing. No trace of her could be found, in spite of most painstaking search and wide advertising. Twenty-three days after her disappearance her body was found in one of the extensive corn fields, where the farmers were cutting the corn for ensilage. This corn was very thick and very tall. The fields are very extensive, and had been searched through by several individuals.

A female patient at the Westborough State Hospital was bed-ridden, much demented, restive, untidy, and incoherent. A physical examination showed that she was arteriosclerotic, with a high blood pressure. She had contractures of the limbs, which necessitated her going to the toilet and back in a wheel chair. She had had many attacks of excitement, characterized by restlessness and shouting, and at these times she would often become very cyanotic. These episodes were usually of short duration.

Two nurses were giving her a bath in the tub, one holding her head, elevating her. Suddenly, the patient appeared to collapse, and fell back in the water. Momentarily, her head was submerged. She was immediately removed, and taken to her room. On the way she talked and breathed, but was so very cyanotic that the doctor was sent for. Artificial respiration was employed, but without success. The patient suddenly died.

The medical examiner made careful inquiry, and came to the

conclusion that death was from natural causes. Autopsy was objected to.

It is not believed that the momentary submergence of her head had anything to do with the death, inasmuch as she breathed for some ten minutes afterwards.

A female patient at the Worcester State Asylum, who was at times noisy in her talk to imaginary people, but never aggressive or troublesome to those about her, was fatally assaulted by a fellow patient with a floor polisher. The resulting injury was a fractured skull. The assailant was suffering from psychosis of a paranoid form, and during more than three years of hospital life in two institutions she had never been threatening, abusive, or in any way inclined to violence, except on one occasion about a week previous to the present assault. At this time she rather viciously attacked a little, deformed patient, seizing her by the throat, and trying to throw her to the floor. No injury resulted, and the affair did not attract much attention. The floor polishers had recently been changed from a light implement to a heavy one, weighing about 25 pounds, for the express purpose of preventing such misuse as this.

A male patient at the Grafton Colony of the Worcester State Asylum escaped from one of the buildings, and committed suicide by throwing himself before a passing train.

Investigation of this affair seemed to show gross neglect on the part of the attendant.

A male patient at the Gardner Colony, confined to his bed in a single room, was fatally injured by a fellow patient, who assaulted him with a floor polisher. The assaulting patient was known to be dangerous, and had been kept in seclusion for a considerable period. It would appear that, through some confusion of orders, this patient had been allowed to be out of seclusion, and was left alone with the victim on the second floor of the building, while the attendant went down to get their dinners.

Some of the attendants clearly understood the situation, while others, who were called upon to relieve from time to time, did not so understand it.

A male patient at the Bridgewater State Hospital, who was deeply demented, had to be watched constantly at meal time, to

keep him from filling his mouth with large masses of food. More recently it had been necessary to feed him with soft solids, in order to prevent him from choking himself.

One morning, about 7 o'clock, he seized an orange from another patient, and pushed it into his mouth, and deep into the throat. He fell to the floor. The attendants immediately came to his assistance, and being unable to remove the obstruction, sent for the doctor. It was with the greatest difficulty that the orange was finally removed, but not before the patient had become asphyxiated.

A male patient at the McLean Hospital, who was violent and destructive, had shown repeated tendencies to attack those about him. He had a special nurse at night.

On one occasion the patient went to the toilet, and on his return came up behind his nurse, who was sitting at a table, and attacked him. A struggle ensued, in which the patient was injured. Symptoms of internal injury developed, and after surgical consultation an exploratory operation was performed. An internal hemorrhage of the bowel was found, and a resectioning of a short portion was found to be necessary. The patient died about a week after the accident.

A searching inquiry and investigation was instituted by the superintendent and the State Board of Insanity. The matter was also reported to the Medical Examiner, who performed an autopsy. The matter was also placed in the hands of the District Attorney, who found no cause for further action.

Two female patients at the Worcester State Hospital, who had been given parole of the grounds for many weeks without abuse of the privilege, failed to return one night at supper time, as usual. Thorough search by the hospital and State authorities was of no avail, until about ten days after their disappearance their bodies were found in the lake.

It was not believed that they were actively suicidal.

A male patient at the Taunton State Hospital went into a vacant room, and with a piece of tin which he had removed from a tobacco box succeeded in making an incision on the left side of his throat, and also on both wrists. He made an uneventful recovery.

A few days later he was removed to another ward, where for

a month he got along fairly well with close watching. One day, when he had appeared particularly restless, he entered a room, barricaded the door with the bedstead and a screen frame, broke a square of glass, and with a fragment cut his throat. The barricaded door prevented prompt interference, and the patient continued his desperate efforts until overpowered. The patient died in about twenty minutes.

This man did not have a special nurse. The usual instructions for watching suicidal patients had been given. He was not, at the time, believed by the physicians to be so desperately suicidal as the facts prove.

A female patient at the Northampton State Hospital, who was known to be suicidal, eluded the nurse, went into an empty room, and hung herself to the window guard with a stocking. She was found not long afterwards, as the body was warm when discovered.

This patient was on the suicidal ward. The nurses had been given explicit instructions in regard to watching her, and confessed that they knew her tendencies. The nurse who had her under observation, however, permitted the patient to go into the toilet, and remain there alone. A few minutes later she saw the patient come from the toilet and go to the dining room at the further end of the ward. There was a nurse in the dining room, but not having the patient under her immediate observation, she permitted her to leave the dining room, after which time neither nurse knew where she was.

This suicide was manifestly due to the neglect of the nurse, who was later discharged from the service.

A female patient at the Danvers State Hospital had been allowed to go occasionally to the sewing room. One day, while returning to the ward with the patients, she separated herself from the group, and jumped through a window on the second floor to the ground below. She died four hours later. This was one of a few windows which had been left unguarded, although the guards were, at the time, in the process of construction.

A male patient at the Westborough State Hospital, suffering from depression, gave indications of suicidal intent soon after admission. Two or three weeks later, however, he appeared to

have lost his suicidal tendencies, and, with the exception of brief periods of mild depression, continued to do well. Four months after admission he appeared again depressed, got up in the night, went to the toilet opening from a dormitory where he was sleeping, and hung himself with the chain which pulls the flush valve of the tank.

The night nurse, who has many patients to look after, had noticed no special depression, nor any suspicious manner. He had not received special orders in regard to this patient. The patient could speak no English, and it was difficult to comprehend his mental state. The physician had in mind to transfer this patient to a more secure ward, but had decided to delay it for a while.

A female patient at the Boston State Hospital forced her way into the utility room of her ward, where a nurse was preparing for a surgical dressing. She seized a bottle of bichloride tablets, and succeeded in swallowing several of them, in spite of the nurse's efforts to prevent her. Although given immediate attention, she died in a little over half an hour. She was known to be suicidal, and had made previous attempts.

The nurse had taken the precaution to lock herself in this room, but the patient attacked her just as she was locking the door, and was strong enough to overpower her.

A male patient at the Medfield State Asylum, who had a history of having suicidal tendencies at the beginning of his insanity seven years ago, got up about 3 o'clock one morning and attempted to hang himself with a sheet to the protecting screen of the veranda. There had apparently been no suicidal tendencies for years in this man, and certainly nothing since his admission to Medfield about a year previous. Following this attempt he was put under close observation, and finally transferred to another ward, where he could be better watched.

Soon, however, when the night nurse was absent on a trip downstairs, the patient succeeded in hanging himself by means of his suspenders, or those of another patient, to a post in the water section between two of the toilet bowls. The nurse had been cautioned to watch this man, because of his suicidal tendencies, but because of the large number of patients whom he

was responsible for, it was impossible for him to keep him in sight all the time.

A male attendant at the Worcester State Hospital was seen to strike two patients with a broom, causing lacerated wounds of their scalps.

The attendant was arrested, and sentenced to six months' imprisonment.

A male patient at the Northampton State Hospital showed numerous bruises, indicating rough handling. There was no serious injury. Two attendants admitted that they had had a struggle with the patient, and one affirmed that they both had struck him. The other denied striking.

Both men were arrested, and after trial, the judge fined the attendant who denied any assault \$12, but discharged the other.

A male patient at the Northampton State Hospital attempted to escape. He was pursued, and brought back to the hospital by two attendants. People who witnessed his capture reported abuse. The attendants were arrested, and after trial one was fined \$50, and the other released.

The patient suffered no serious injury.

Two patients at the Danvers State Hospital became involved in a quarrel. The attendant separated them, and was seen to have kicked one of the patients.

The attendant was arrested, and fined \$10 in court.

A male attendant at the Danvers State Hospital became impatient with a patient and struck him. Although no serious damage was done, a complaint was lodged against the attendant; he pleaded guilty, and was fined \$15.

Two male attendants at the State Infirmary were found guilty of an assault upon a patient. The resulting injuries were not serious.

Both men were arrested and fined \$20 each in court.

A male patient at the Worcester State Hospital, suffering from dementia *præcox*, was found one morning to have a separation of the right acromio-clavicular articulation.

The night nurse reported that during the night this patient went to the toilet, and on the way back attacked the attendant, who had had occasion to request him to be quiet and stop walk-

ing about the dormitory. The patient was a strong, heavy man. His attack was vicious, and the attendant, to protect himself, was obliged to throw him to the floor. After holding him a moment he let up, and the patient went to bed without any apparent difficulty. The attendant thinks without doubt the injury occurred at this time, but alleges that he used only such force as was necessary to protect himself.

Although the attendant's word was not doubted, the matter was reported to the police and the District Attorney, who investigated the case, and by whom no action was taken.

A male patient at the Northampton State Hospital had been through a period of restlessness and acute mental excitement. Following this he improved, and became so well that he went to the kitchen to assist in the work.

One day he appeared to have what the kitchen man called "convulsions," during which he dropped what he was carrying. After that, he was kept from the kitchen, and assisted in the dining room for the male nurses.

One night, about six weeks after admission, he became disturbed and agitated, and required restraint by two or three nurses. The explanation afterwards was that he could not control himself, and did not know what was the matter.

A day or two later he was in bed, apparently sleeping, with his head covered with a sheet. Suddenly, the nurse noticed that he was struggling, and going to the bed, uncovered his head, and found the patient tearing at his eyes with his fingers. He made no remark. Afterwards he said that his Heavenly Father commanded him to do this. His eyes were given prompt, skilful treatment, but his sight was destroyed entirely in one and badly impaired in the other. For many days afterwards he made desperate efforts to pull off the bandages, and continue the injury to his eyes. To prevent him doing this, two attendants restrained him, and finally mechanical restraint had to be resorted to.

He finally passed through his period of impulsive excitement, and has made no further attempt to injure himself.

COMMITMENTS FOR OBSERVATION AND TEMPORARY CARE FOR THE WHOLE STATE.

The number of commitments for observation (under section 43, chapter 504, Acts of 1909) was 83 for the year. The period designated by the judges in the various cases was usually thirty days.

Of these cases, 36 were subsequently committed, 1 was recommitted for observation, 32 were discharged, 2 were committed to other institutions, 1 was transferred to another institution, 2 died and 9 were remaining at the close of the year.

Under chapter 307 of the Acts of 1910, requiring that emergency cases which come into the care or protection of the police in Boston be taken to the Boston State Hospital for temporary care, and forbidding the use of prisons, jails or penal institutions for such persons, 403 were taken to the Boston State Hospital. Of these, 122 were subsequently regularly committed, 122 were discharged, 5 died, 1 was admitted voluntarily, 1 was readmitted under chapter 395, Acts of 1911, and 8 were returned to institutions. Seven such cases were remaining at the close of the year.

There were 11 admissions under section 34, chapter 504 of the Acts of 1909, which provides for the apprehension of a patient before examination and commitment. Two of these were subsequently committed and 4 discharged, 1 was committed for observation, 3 were committed to other institutions, and there was 1 remaining at the close of the year.

Under chapter 395 of the Acts of 1911, 897 cases were admitted, of whom 435 were subsequently committed, 16 were committed for observation, 186 were discharged, 87 were received under the voluntary status, 3 were returned to institutions, 3 were admitted as emergency cases, 7 were readmitted under chapter 395, 132 were committed to other institutions, 1 went voluntarily to another institution, 12 died, and 15 were remaining at close of year.

	ADMISSION UNDER —					
	Section 34, Chapter 504, Acts of 1909 (Apprehension of Alleged Insane Person).	Section 43, Chapter 504, Acts of 1909 (for Observation).	Chapter 307, Acts of 1910 (for Temporary Care, Boston Hospital).	Chapter 395, ¹ Acts of 1911 (for Temporary Care).	Section 45, Chapter 504, Acts of 1909 (for Voluntary Care).	Section 42, Chapter 504, Acts of 1909 (for Care in Emergency).
Admitted during year, . . .	11	83	403	897	788	24
Discharged,	4	32	122	186	461	4
On visit,	-	-	-	-	35	-
On escape,	-	-	-	-	1	-
Died,	-	2	5	12	19	-
Regularly committed, . . .	2	36	122	435	90	17
Committed for observation, . . .	1	1	-	16	2	-
Admitted under chapter 395, . . .	-	-	1	7	-	-
Admitted as emergency, . . .	-	-	-	3	-	-
Admitted voluntarily, . . .	-	-	1	87	-	-
Returned to institutions, . . .	-	-	8	3	-	-
Transferred to other institutions, . . .	-	1	-	-	-	-
Committed to other institutions, . . .	3	2	136	132	53	1
Voluntary to other institutions, . . .	-	-	1	1	4	-
Remaining Sept. 30, 1913, . . .	1	9	7	15	123	2

¹ Does not require a physician's certificate, and takes the place of section 44, chapter 504, Acts of 1909.

It is to be noted with interest that during the year covered by the report there were 788 voluntary admissions, 897 under chapter 395, Acts of 1911, and 403 under chapter 307, Acts of 1910, making a total of 2,088 patients who were admitted without any action of the court or judge or other very formal proceeding. Of these 2,088 cases thus admitted, 769 were discharged without commitment, 36 died before commitment, 88 signed voluntary requests, and 123 voluntary patients continued their stay in the voluntary status, no commitment being considered necessary, making a total of 1,016 persons who secured the benefits of treatment in our public or private hospitals for the insane without the formality of a procedure before a judge, and which would have thus been attended with

delays, legal exactions, semi-publicity and the stigma of having been pronounced insane, all of which was thus obviated, to the comfort and satisfaction of the patients and friends.

THE STABILITY OF SERVICE

in the institutions averages about the same as the previous year. There were 2.55 rotations of all employees, compared with 2.48 rotations the previous year; 2.80 in the nursing staff, compared with 2.76 the previous year. The maximum stability for the whole service was at the Foxborough Hospital, where there were only 1.39 rotations; and for the nursing staff, at the same institution, where there were 1.57 rotations.

The average length of the interval between rotations of all employees was 4.75 months; of all nurses, 4.33 months; men nurses, 3.52 months; women nurses, 5.14 months.

The average shortage of employees was 9.88 per cent.

Rotation in Service of Persons employed in Institutions during the Fiscal Year ending Nov. 30, 1913.

1914.]

PUBLIC DOCUMENT — No. 63.

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INSTITUTIONS.	WARD SERVICE.						WHOLE SERVICE.			
	MEN.			WOMEN.			TOTALS.		Number of All Employees.	Number Different Persons Employed.
	Average Number of Nurses.	Number Different Persons.	Rotations.	Average Number of Nurses.	Number Different Persons.	Rotations.	Average Number of Nurses.	Number Different Persons.		
The insane:										
State hospitals: —										
Worcester, * * *	83	346	4,169	101	306	3,030	184	652	3,543	348
Taunton, * * *	70	231	3,305	69	204	435	139	129	269	1,015
Northampton, * * *	38	148	3,895	38	90	2,368	76	238	3,131	654
Danvers, * * *	72	194	2,694	86	188	186	158	382	157	388
Westborough, * * *	79	270	3,418	105	268	2,552	184	2,418	302	2,417
Boston, * * *	80	259	3,237	147	276	1,877	227	535	2,924	332
Totals, * * *	422	1,448	3,431	547	1,332	2,435	969	2,780	2,869	1,807
State asylums: —										
Worcester, * * *	61	390	6,393	70	213	3,043	131	603	4,603	262
Medfield, * * *	70	198	2,828	123	239	1,943	193	437	361	1,034
Gardner Colony, * * *	42	114	2,714	17	47	2,765	59	161	2,264	874
Totals, * * *	173	702	4,658	210	499	2,376	383	1,201	3,136	748
Totals, hospitals and asylums, * * *	595	2,150	3,613	757	1,831	2,412	1,352	3,981	2,944	2,555
Miscellaneous:										
Monson Hospital, * * *	42	108	2,571	48	147	3,062	90	255	2,833	189
Forbrough Hospital, * * *	20	32	1,600	1	1	1,000	21	33	1,571	79
Massachusetts School for Feeble-minded at Waltham, * * *	24	64	2,666	153	271	1,771	177	335	1,892	281
Wrentham School, * * *	3	6	2,000	31	90	2,903	34	96	2,823	67
Totals, * * *	89	210	2,359	233	509	2,184	322	719	2,232	616
Aggregates, * * *	674	2,360	3,501	990	2,340	2,363	1,674	4,700	2,807	3,171

¹ Includes Psychopathic Department.

THE CAPACITY FOR PATIENTS

in all the institutions Dec. 1, 1913, was 15,535, compared with 14,756 the previous year, an increase of 679 beds. The whole number of patients in them was 15,847, compared with 15,437 the previous year, an increase of 410. Hence there is a deficiency of provision for 312 patients, or 2.01 per cent.

THE CAPACITY FOR THE INSANE

in State institutions Dec. 1, 1913, was 12,516, an increase of 536 beds. The whole number of patients in them was 12,799, compared with 12,428 the previous year, an increase of 371. Hence there is a deficiency of provision for 283 patients, or 2.26 per cent.

Work was in progress at the close of the year or appropriations had been granted for 282 new beds for the insane, and 345 beds for the feeble-minded, a total of 627 prospective beds, compared with 817 the previous year. These will become available the coming year.

Working Capacities of Institutions, 1913.

INSTITUTIONS.	WORKING CAPACITIES, 1913.			TOTALS.	
	MALES.	FEMALES.	INCREASE FOR THE YEAR.		
	DEC. 1, 1913.	DEC. 1, 1913.	INCREASE FOR THE YEAR.	DEC. 1, 1913.	INCREASE FOR THE YEAR.
The insane:					
State hospitals: —					
Worcester,	783	642	1	1,425	136
Taunton,	595	598	—	1,193	120
Northampton,	426	393	—	819	—
Danvers,	570	777	61	1,347	191
Westborough,	518	675	81	1,193	81
Boston, ²	511	776	116	1,287	133
Totals,	3,403	155	3,861	207	7,264
State asylums: —					
Worcester,	665	58	65	1,342	123
Medfield,	637	905	—	1,542	—
Gardner Colony,	424	1	257	681	31
Totals,	1,726	59	1,839	95	3,565
Hospitals and asylums, :					
Mental wards, State Infirmary,	5,129	214	5,700	302	10,829
Bridgewater Hospital,	177	—	—	673	—
Foxborough Hospital (insane),	818	20	496	—	818
Wrentham School,	196	—	—	196	20
Totals,	1,191	20	496	—	1,687
Total insane,	6,320	234	6,196	302	12,516
Miscellaneous: —					
Monson Hospital,	432	—	421	—	853
Foxborough Hospital (inebriate),	103	—	—	103	—
School for the Feeble-minded at Waltham,	943	43	542	—	1,483
Wrentham School,	185	—	395	200	580
Totals,	1,661	43	1,358	200	3,019
Aggregates,	7,981	277	7,554	502	15,535

¹ Decrease.² Includes Psychopathic Department.

Working Capacities of Institutions, 1913 — Concluded.

INSTITUTIONS.	NUMBER OF PATIENTS DEC. 1, 1913.			Increase for the Year.	Number of Males.	Number of Females.	Excess of PATIENTS.	
	Males.	Females.	Totals.				Number.	Percentage.
The insane: —								
State hospitals: —								
Worcester, —	662	673	1,335	29	121 ¹	31	90 ¹	6.32
Taunton, —	609	519	1,128	12	14	79 ¹	65 ¹	5.45
Northampton, —	452	448	900	51	26	55	81	9.89
Danvers, —	612	809	1,421	6 ¹	42	32	74	5.49
Westborough, —	536	714	1,250	14	18	39	57	4.78
Boston, ² —	580	737	1,317	49	69	39 ¹	30	2.33
Totals, —	3,451	3,900	7,351	149	48	39	87	1.20
State asylums: —								
Worcester, —	635	728	1,363	217	30 ¹	51	21	1.56
Medfield, —	685	1,007	1,692	7 ¹	48	102	150	9.73
Gardner Colony, —	443	240	683	—	19	17 ¹	2	.29
Totals, —	1,763	1,975	3,738	210	37	136	173	4.85
Hospitals and asylums, —	5,214	5,875	11,089	359	85	175	260	2.40
Mental wards, State Infirmary, —	196	511	707	21 ¹	19	15	34	5.05
Bridgewater Hospital, —	798	—	798	21	20 ¹	—	20 ¹	2.44
Foxborough Hospital (insane), —	205	—	205	12	9	—	9	4.59
Totals, —	1,199	511	1,710	12	8	15	23	1.36
Total insane, —	6,413	6,386	12,799	371	93	190	283	2.26
Miscellaneous: —								
Monson Hospital, —	468	458	926	28	36	37	73	8.56
Foxborough Hospital (inebriate), —	147	—	147	64 ¹	44	—	44	42.72
School for the Feeble-minded at Waltham, —	930	604	1,534	48	11 ¹	62	51	3.44
Wrentham School, —	195	246	441	27	10	149 ¹	130 ¹	23.96
Totals, —	1,740	1,308	3,048	39	79	50 ¹	29	.96
Aggregates, —	8,453	7,694	15,847	410	172	140	312	2.01

² Includes Psychopathic Department.¹ Decrease.

THE PUBLIC INSTITUTIONS.

WORCESTER STATE HOSPITAL.

Opened in January, 1833. Present capacity, 1,425; increase for the year, 136.

Valuation of plant, per capita of capacity, \$1,541; real estate, \$1,418; personal, \$123.

Daily average number of patients, 1,346; decrease for the year, 14. Number Oct. 1, 1913, 1,330.

All commitments, 594; increase for the year, 82.

Commitments as insane, 568; increase for the year, 82.

First cases of insanity, 461; 81.16 per cent.

Voluntary admissions, 6.

Emergency commitments, 2.

Temporary-care admissions, 50.

Commitments as inebriate, 12.

First Cases of Insanity.

Native-born patients, 47.93 per cent.; mothers, 23.90 per cent.; fathers, 22.72 per cent.

Age sixty years or over, 21.23 per cent.

Resident in cities or large towns, 84.38 per cent.; country districts, 15.62 per cent.

Previous duration of insanity, under six months, 47 per cent.

Curable forms of insanity, 19.96 per cent.

Causes: congenital, 8.24 per cent.; hereditary, 19.09 per cent.; alcoholic, 18.22 per cent.; senility, 13.45 per cent.; coarse brain lesions, 11.50 per cent.; syphilis, 11.50 per cent.

Recoveries of the Insane.

Whole number, 72; 12.68 per cent. of commitments.

Recoveries of first cases of insanity, 50; 10.85 per cent. of first cases.

Recoveries in curable group A, 47; 51.09 per cent. of such curable cases.

Deaths of the Insane.

Whole number, 183; 9.66 per cent. of whole number of persons treated.

Curable forms of mental disease present in 6.56 per cent.; tuberculosis in 3.83 per cent.; senile insanity in 33.33 per cent.; general paralysis in 18.03 per cent.; coarse brain lesions in 15.30 per cent.

Finances.

Expenditures from maintenance funds, \$335,249; total receipts, \$65,130, being \$40,155 from private patients, \$21,752 from reimbursing patients, \$3,223 from other sources.

Weekly per capita cost of maintenance computed on net expenses, \$4.72.

Weekly per capita cost of whole service, \$1.98; ward service, \$0.76.

One person employed for every 3.89 patients; 1 nurse for every 7.35 patients.

Average monthly wage for all persons employed, \$33.44; for nurses, \$24.51; men, \$26.41; women, \$22.96.

Extract from Superintendent's Annual Report.

Considerable work has been accomplished in the line of industrial therapeutics. In our men's industrial room have been manufactured the brooms and brushes used in the institution. A large amount of furniture has been repaired, baskets made and many other articles for domestic use produced. The women do work in bookbinding, make rugs, baskets, trim hats, do sewing, embroidery and a lot of miscellaneous work. Many of these patients have been taken from the disturbed wards, and an effort is being made to re-educate them in the ways of a more orderly method of life. At the last Christmas season a large exhibit was made here of articles manufactured by patients in this and other institutions. This exhibit was visited by over a thousand people.

It is proposed to add to our working staff a director of industrial therapeutics. This person, preferably a woman, should have charge of the therapeutic industrial activities of the whole institution. It should be her duty to lay out and direct the work and to inspire in her subordinates a proper and diligent application and in her patients an interest and enthusiasm for the work.

But for the drastic cut in our maintenance request for last year, a

social service worker would be now in service. Considerable social service work has been done by various members of our medical staff, but they have not been able to give sufficient time to this work to fully meet the needs of the situation. A specially trained social service worker should be added to our staff as soon as a suitable person can be found to fill the place. Since October 1 a eugenics worker, furnished by the Eugenics Record Office, Cold Spring Harbor, Long Island, N. Y., has been at the institution and has been prosecuting investigations along her special line of work. This woman has been utilized, to some extent, in social service work. . . .

With hospital buildings of this type of construction, built on the block plan and closely associated together, considerable difficulty is often experienced in making a satisfactory classification of acute patients, inasmuch as the institution can in no way limit or regulate the character of the cases admitted, but must receive and care for every one who comes, up to the limit of capacity. When too closely associated, excitable cases seem sometimes to react upon each other. Still it would seem manifestly unfair to disturb the comfort and welfare of quiet and orderly patients by thrusting upon them excitable and disorderly persons. Then, again, while as much regard as possible is paid to the associating together of persons of kindred tastes and congenial disposition, quite often the classification has to be made largely in accordance with the behavior of the patient. I should regard all of our large institutions, built on the block plan, as better adapted to the care of chronic and quiet cases than to the treatment of the acutely disturbed. At no very distant date, in my opinion, this community will demand the establishment of a psychopathic unit, the buildings of which can well be erected upon these grounds, but at such distance from the present structure and with such facilities for classification as will obviate much of our present difficulty.

TAUNTON STATE HOSPITAL.

Opened in April, 1854. Present capacity, 1,193; increase for the year, 120.

Valuation of plant per capita of capacity, \$772; real estate, \$652; personal, \$120.

Daily average number of patients, 1,123; increase for the year, 89.

Number Oct. 1, 1913, 1,143.

All commitments, 577; increase for the year, 50.

Commitments as insane, 544; increase for the year, 24.

First cases of insanity, 439; 80.70 per cent.

Voluntary admissions, 5.
Emergency commitments, none.
Temporary-care admissions, 77.
Commitments as inebriate, 11.

First Cases of Insanity.

Native-born patients, 51.03 per cent.; mothers, 29.32 per cent.; fathers, 28.43 per cent.

Age sixty years or over, 25.40 per cent.

Residents in cities or large towns, 67.88 per cent.; country districts, 32.12 per cent.

Previous duration of insanity, under six months, 56.78 per cent.

Curable forms of insanity, 16.63 per cent.

Causes: congenital, 4.78 per cent.; hereditary, 19.82 per cent.; alcoholic, 19.36 per cent.; senility, 10.48 per cent.; coarse brain lesions, 4.78 per cent.; syphilis, 3.19 per cent.

Recoveries of the Insane.

Whole number, 38; 6.99 per cent. of commitments.

Recoveries of first cases of insanity, 29; 6.61 per cent. of first cases.

Recoveries in curable group A, 19; 26.03 per cent. of such curable cases.

Deaths of the Insane.

Whole number, 162; 9.71 per cent. of whole number of persons treated.

Curable forms of mental diseases present in 7.41 per cent.; tuberculosis in 12.96 per cent.; senile insanity in 33.95 per cent.; general paralysis in 11.11 per cent.; coarse brain lesions in 10.49 per cent.

Finances.

Expenditures from maintenance funds, \$272,229; total receipts, \$36,676; being \$21,294 from private patients, \$13,423 from reimbursing patients, \$1,959 from other sources.

Weekly per capita cost of maintenance computed on net expenses, \$4.65.

Weekly per capita cost of whole service, \$1.94; ward service, \$0.80.

One person employed for every 4.15 patients; 1 nurse for every 8 patients.

Average monthly wage for all persons employed, \$34.83; for nurses, \$27.78; men, \$30.46; women, \$25.04.

Extract from Superintendent's Annual Report.

From our training school for nurses, a class of 16—8 men and 8 women—were graduated last spring. James Edwin Macdonald, having maintained the highest standard of scholarship throughout the course, was awarded the honor of delivering the valedictory address. He also won the prize of \$25 offered by Dr. Stedman of your Board "to that member of the graduating class who, during the whole period of hospital service, shall have shown the greatest efficiency in the way of *personal interest in and individual care of his or her charges.*" Alice Mildred Lockhart won the prize for the "*greatest general improvement.*"

This year Dr. Stedman has generously offered the same prize, while a friend of the school offers a prize of \$15 to that member of the graduating class showing the greatest general improvement. The members of the last graduating class showed a keen interest in their work and a healthy rivalry in striving for the above-mentioned honors. The present school membership is as follows:—

Senior class: men, 4; women, 20; total, 24. Intermediate class: men, 13; women, 23; total, 36. Junior class: men, 18; women, 18; total, 36. Probationers: men, 12; women, 14; total, 26.

During the past year our school has affiliated with the New York Nursery and Child's Hospital, New York City, thus providing for those of our nurses who desire a three months' course in obstetrical nursing; this, in connection with the six months' course in general nursing previously provided by affiliation with the Boston City Hospital, will enable them to take up private nursing with a good all-round equipment, or will correspondingly increase their value to our hospital as long as they may continue in our service. . . .

In years past we have from time to time held clinics at our hospital to which local physicians were invited and which were largely attended. We plan to hold another early in February next for the benefit of the Bristol County branch of the Massachusetts Medical Society, and hope to make it, at least, an annual event. . . .

During the past year efforts have been made to place suitable patients, for whom for various reasons home care was not possible, in

private families near to the hospital. Dr. John F. O'Brien has been given the medical supervision of the work, with Miss Marshall as lay assistant. Nine patients—7 women and 2 men—have been placed. One man has been returned, leaving 8 in families at the present time. This, of course, is only a small beginning, and it is too soon to speak of results; but we are hopeful that the step is in the right direction, and that the comfort and happiness of the patients so treated will be promoted thereby.

Our acute wards that were in active operation when the last report was issued have continued to be most helpful. The combined bath and out-of-door treatment has proved valuable in many cases, as was expected. The special hydrotherapeutic treatment has proved useful in selected cases. . . .

We find that the various entertainments provided for amusement and recreation are much appreciated by our patients, and special efforts along this line have been made during the past year. During the summer twelve picnics were held, attended by 747 patients; the annual clambake was held in August and was attended by 565 patients; the Fourth of July was appropriately celebrated by field sports that were heartily participated in by both patients and employees. The national game of baseball appears to be the favorite with both patients and employees, and our ball team played with outside teams on each picnic day and acquitted itself with much credit, besides affording our patients much pleasure. During the cooler months, besides the two evenings weekly in the recreation hall, entertainments were given fortnightly on the wards caring for the disturbed patients, together with card parties and social gatherings on wards caring for quieter patients.

Dr. Lester F. Norris conducted a class in gymnastics for both patients and employees during the winter.

NORTHAMPTON STATE HOSPITAL.

Opened in August, 1858. Present capacity, 819.

Valuation of plant, per capita of capacity, \$1,257; real estate, \$1,126; personal, \$131.

Daily average number of patients, 883; decrease for the year, 14.

Number, Oct. 1, 1913, 909.

All commitments, 391; increase for the year, 44.

Commitments as insane, 370; increase for the year, 36.

First cases of insanity, 305; 82.43 per cent.

Voluntary admissions, 22.

Emergency commitments, none.
Temporary-care admissions, 50.
Commitments as inebriate, 1.

First Cases of Insanity.

Native-born patients, 55.63 per cent.; mothers, 35.93 per cent.; fathers, 33.91 per cent.

Age sixty years or over, 22.30 per cent.

Resident in cities or large towns, 81.64 per cent.; country districts, 18.36 per cent.

Previous duration of insanity, under six months, 43.84 per cent.

Curable forms of insanity, 20.66 per cent.

Causes: congenital, 35.08 per cent.; hereditary, 28.85 per cent.; alcoholic, 20.33 per cent.; senility, 13.11 per cent.; coarse brain lesions, 5.90 per cent.; syphilis, 2.62 per cent.

Recoveries of the Insane.

Whole number, 53; 14.32 per cent. of commitments.

Recoveries of first cases of insanity, 44; 14.43 per cent. of first cases.

Recoveries in curable group A, 41; 65.08 per cent. of such curable cases.

Deaths of the Insane.

Whole number, 116; 9.27 per cent. of whole number of persons treated.

Curable forms of mental disease present in 6.03 per cent.; tuberculosis in 9.48 per cent.; senile insanity in 40.52 per cent.; general paralysis in 12.07 per cent.; coarse brain lesions in 14.61 per cent.

Finances.

Expenditures from maintenance funds, \$186,151; total receipts, \$51,666; being \$33,418 from private patients, \$15,442 from reimbursing patients, \$2,806 from other sources.

Weekly per capita cost of maintenance computed on net expenses, \$3.94.

Weekly per capita cost of whole service, \$1.52; ward service, \$0.59.

One person employed for every \$5.70 patients; 1 nurse for every 11.78 patients.

Average monthly wage for all persons employed, \$37.69; for nurses, \$30.60; men, \$32.49; women, \$28.73.

Extract from Trustees' Annual Report.

For several years we have been studying how best to care for the patients of our district, which comprises the four western counties, without their being removed from the district.

In our reports for 1911 and 1912 the advisability of establishing a colony was mentioned, but we had no definite plan to recommend till we should have studied the matter further. This spring, with the approval of the State Board of Insanity, we suggested a plan to the Legislature, and asked for an appropriation to purchase land somewhere in Berkshire County, where a colony might be established under our management to care for the mild cases that would otherwise be transferred to the asylums in the eastern part of the State, with the expectation that in time it would become an independent institution to care for all of the patients of that county.

There are excellent reasons for selecting that county as the location for the proposed colony. The hospital at Northampton, to which the patients from Berkshire are now committed, is too far away,—three hours' ride by train from the nearest court house, and five hours, and even more, from the homes of many of the patients. Consequently, commitments are often delayed beyond the time when it would be most advantageous to the patient to be placed under treatment.

Of the 460 patients transferred to the asylums mentioned, 129 were from Berkshire County. Already far from home in Northampton, they were removed still farther away. Many complaints have been made in times past by relatives of these patients, at what seemed to them an injustice.

We again present this matter for consideration, and recommend that a special appropriation be made to begin such an undertaking.

Extract from Superintendent's Annual Report.

One patient in every 5 admitted during the year was sixty years of age or older. It is noticeable that the relative proportion of old persons, of the age of seventy and over, is very large. This proportion has steadily increased since the opening of the hospital in 1858. During the first five years only 1 in 80 of the patients admitted was of the age of seventy. During the next ten years the proportion had increased

to 1 in every 24, and during the following period of fifteen years, to 1 in every 13. Since then it has continued to grow larger till it is now — and for the past few years — 1 in every 8.

At present there are in the hospital 220 patients of the age of sixty or older, 97 of these being over seventy, 21 being over eighty and 4 being over ninety years old. These patients have varying degrees of mental defect or incapacity making their commitment legal. Many of them are dotards who could be easily cared for at home if their relatives were willing to keep them. Some of them have no homes to go to, and these we try to place in family care, but not many families are willing to take them. Some provision is needed for their care, but they would be more comfortable where not surrounded by the insane, and the energy in and expense caring for them at the hospital could be better applied to the care of the insane. . . .

The majority of patients who are dismissed are now allowed to go on trial visit. The hospital tries to keep them under observation through correspondence and visits. In some cases where it is doubtful whether the patient can get along well in the community he is asked to report in person to the hospital. We find that they make no objections to this, but come willingly, and seem to appreciate that this requirement is for their interest.

Our out-patient service has been continued as outlined in the reports of 1910, 1911 and 1912. Dr. Whitney reports concerning the patients who were placed in family care as follows: 24 women and 2 men were in family care at the beginning of the year. During the year 13 women and 1 man were placed in homes, making the full number so cared for, 37 women and 3 men. Of this number 4 women were discharged from our care, 2 died, 1 went to the care of her brother in another State and 1 eloped, going out of the State to New York City. Seven women and 1 man were returned to the hospital for various reasons; 3 temporarily, to relieve the boarding mistress, one of them later returning to the same home; 2 because of incompatibility with the caretaker, later being placed in another family where they have done well; 1 man following an operation for appendicitis who later went back to the same family; and 4 women who were found to be physically and mentally unsuitable for family care.

Of those who remain in family care at the end of the year, 2 men are each earning \$15 a month and board, 1 woman is earning \$4 a month and board and 3 women are earning their board.

These patients have been visited frequently at unexpected times so that their actual conditions and surroundings might be noted. The care of them has been uniformly good, and the patients seem to appreciate what is done for them.

During the year various towns in our district were visited 161 times, and often several families were visited in the same town. Efforts to

find suitable homes and caretakers have been continued. Besides the personal visits of Dr. Whitney, many letters have been sent to the overseers of the poor and to physicians in various towns. Our assistant has noticed at times an opposition by the citizens of some of the smaller towns to the placing out of State dependents.

It has not been easy to find a large number of boarding places, or, on the other hand, to find patients suitable for family care. We have usually been able to send to their own homes such cases as would otherwise be suitable for boarding out. We have been surprised at the reluctance of patients to leave the hospital, though usually it has been found that those whom we have persuaded to go have become quite contented in their new home. . . .

We have for many years advised in consultation, without charge, any one who would personally come to the hospital,—or his friend or physician,—and have gone or have sent out assistants in some cases to the homes of persons who needed advice, at no expense to them. To extend our sphere of usefulness in this direction a letter is now being prepared to be sent to all physicians of our district stating our willingness to see any one who will come here or to send a competent assistant to see cases who cannot come or who are unwilling to come, for which we should charge only the actual cost of travel where the patient cannot afford to pay a fee.

DANVERS STATE HOSPITAL.

Opened in May, 1878. Present capacity, 1,347; decrease for the year, 19.

Valuation of plant, per capita of capacity, \$1,366; real estate, \$1,258; personal, \$108.

Daily average number of patients, 1,450; decrease for the year, 2.

Number, Oct. 1, 1913, 1,445.

All commitments, 635; increase for the year, 120.

Commitments as insane, 622; increase for the year, 117.

First cases of insanity, 494; 79.42 per cent.

Voluntary admissions, 25.

Emergency commitments, none.

Temporary-care admissions, 80.

Commitments as inebriate, 6.

First Cases of Insanity.

Native-born patients, 58.54 per cent.; mothers, 34.95 per cent.; fathers, 35.01 per cent.

Age sixty years or over, 22.56 per cent.

Resident in cities or large towns, 85.83 per cent.; country districts, 14.17 per cent.

Previous duration of insanity, under six months, 50.76 per cent.

Curable forms of insanity, 29.35 per cent.

Causes: congenital, 5.67 per cent.; hereditary, 9.11 per cent.; alcoholic, 15.18 per cent.; senility, 9.11 per cent.; coarse brain lesions, 11.34 per cent.; syphilis, 11.94 per cent.

Recoveries of the Insane.

Whole number, 71; 11.41 per cent. of commitments.

Recoveries of first cases of insanity, 51; 10.32 per cent. of first cases.

Recoveries in curable group A, 46; 31.72 per cent. of such curable cases.

Deaths of the Insane.

Whole number, 204; 9.82 per cent. of whole number of persons treated.

Curable forms of mental disease present in 16.18 per cent.; tuberculosis in 5.39 per cent.; senile insanity in 13.24 per cent.; general paralysis in 20.59 per cent.; coarse brain lesions in 25.49 per cent.

Finances.

Expenditures from maintenance funds, \$354,451; total receipts, \$59,070, being \$32,219 from private patients, \$23,319 from reimbursing patients, \$3,532 from other sources.

Weekly per capita cost of maintenance computed on net expenses, \$4.63.

Weekly per capita cost of whole service, \$1.98; ward service, \$0.68.

One person employed for every 4.81 patients; 1 nurse for every 9.18 patients.

Average monthly wage for all persons employed, \$41.46; for nurses, \$27.15; men, \$29.27; women, \$25.39.

Extract from Superintendent's Annual Report.

Attention was directed in a previous report to the need of more physicians, but unless there is a revision of the salary schedule, making it more attractive for young physicians to take up institutional work, difficulty will be experienced in keeping a sufficient number on the staff. To overcome this difficulty, the question of a revision of the salary schedule, and the advisability of requesting a special appropriation for cottages for a certain number of physicians, should receive early consideration. The hospitals in other States offer more attractive salaries to physicians with hospital experience, and, unless we are able to offer somewhere near as much in the way of salary and accommodations, we can expect our physicians to leave from time to time, just when their services are of much value to the hospital. It has been customary here to pay physicians just out of college from \$400 to \$600 a year. Other States pay as high as \$1,200 for inexperienced men. Most medical colleges are now insisting that graduates enter a general hospital for a year or more. With a fewer number now being graduated, it can be readily seen that some action in the near future is imperative. What has been written regarding increases in salaries and better accommodations for the medical staff is applicable to the nursing force. We are requesting, for the third time, a nurses' home for male attendants, night watches and married couples. Comfortable living quarters away from their place of work should be provided for the nursing force instead of housing them in unsuitable, uninviting rooms in the attic and in the rooms on the wards intended for patients. A substantial increase in wages should be paid the nurses and attendants, especially those whose service has been satisfactory and who have remained in the employ of the hospital for a long period of years, as is the case with many of our employees. . . .

The work in eugenics, and more especially in social service and after-care treatment, has been actively carried on this year with gratifying results. A résumé of the work done appears later in the annual report. One social service worker is insufficient, as information can only be obtained in a limited number of cases. This information is of inestimable value to the physicians, especially with reference to the advisability of the discharge of patients. It is planned to have the social service worker at the hospital on visiting days, to take histories and meet the families of as many patients as possible.

The hospital has been fortunate in securing the services of a competent industry teacher, who conducts classes for both men and women. Occupation has formed a very important part in the treatment of our cases, the selection of which is made by the physicians. The work is seriously hampered by the lack of a suitable place to conduct classes.

The only place available was in a room formerly used by a physician, located over the kitchen and bakeshop, inadequate in size. It is hoped that the request for an appropriation to erect a building for this work will be favorably acted upon.

A serious objection is not infrequently offered by the relatives of patients suffering from acute mental diseases to their being placed on the same wards with chronic cases. This difficulty has long been recognized, and could be obviated had we a modern reception hospital. Such a building for the care and treatment of the acute cases would permit of a more intensified study of the patients and a better classification, which undoubtedly would result in a larger number of patients being benefited.

Dr. J. Herman Haines continues to spend one day at the hospital each week in the examination and treatment of the teeth of our patients. An examination of the teeth of every patient admitted is made and noted on a chart, together with notes of whatever attention is given or required.

Dr. Henry G. Carroll of Salem, Mass., ophthalmologist, visits the hospital at regular intervals, and sees all the patients referred to him by the members of the staff. His services are much appreciated. . . .

A suitable building is desired in which the various industries now being carried on can be properly and adequately cared for. At the present time a large part of this work, such as shoe repairing, making of brooms, repairing and making of furniture, upholstering, mattress making, weaving, etc., is carried on in several rooms entirely inadequate to our needs and located directly above the boiler room of the main heating plant. Here, because of the extreme heat, it is necessary to almost abandon this work in the summer time. The arts and crafts work, which, under the direction of an industry teacher, now plays so important a rôle in the treatment of our cases, is housed in a small room inconveniently located over the bakeshop and kitchen. This room is, likewise, inadequate in size for the needs of the department. The plans call for a building of slow-burning construction, to be of the same general appearance, and located near our present laundry. For this building an appropriation of \$26,000 is asked.

WESTBOROUGH STATE HOSPITAL.

Opened in December, 1886. Present capacity, 1,193; decrease for the year, 8.

Valuation of plant, per capita of capacity, \$846; real estate, \$727; personal, \$119.

Daily average number of patients, 1,238; increase for the year, 48.

Number Oct. 1, 1913, 1,267.

All commitments, 559; increase for the year, 19.

Commitments as insane, 496; increase for the year, 2.

First cases of insanity, 372; 75 per cent.

Voluntary admissions, 56.

Emergency commitments, none.

Temporary-care admissions, 54.

Commitments as inebriate, 42.

First Cases of Insanity.

Native-born patients, 59.62 per cent.; mothers, 38.99 per cent.; fathers, 39.13 per cent.

Age sixty years or over, 17.84 per cent.

Resident in cities or large towns, 69.75 per cent.; country districts, 30.25 per cent.

Previous duration of insanity, under six months, 35.09 per cent.

Curable forms of insanity, 25.54 per cent.

Causes: congenital, 6.72 per cent.; hereditary, 13.71 per cent.; alcoholic, 11.56 per cent.; senility, 8.87 per cent.; coarse brain lesions, 5.65 per cent.; syphilis, 5.38 per cent.

Recoveries of the Insane.

Whole number, 63; 12.70 per cent. of commitments.

Recoveries of first cases of insanity, 48; 12.90 per cent. of first cases.

Recoveries in curable group A, 37; 38.95 per cent. of such curable cases.

Deaths of the Insane.

Whole number, 122; 6.96 per cent. of whole number of persons treated.

Curable forms of mental disease present in 14.75 per cent.; tuberculosis in 11.48 per cent.; senile insanity in 26.23 per cent.; general paralysis in 16.39 per cent.; coarse brain lesions in 15.57 per cent.

Finances.

Expenditures from maintenance funds, \$322,258; total receipts, \$80,143; being \$61,443 from private patients, \$15,998 from reimbursing patients, \$2,702 from other sources.

Weekly per capita cost of maintenance computed on net expenses, \$4.95.

Weekly per capita cost of whole service, \$2.23; ward service, \$0.89.

One person employed for every 3.74 patients; 1 nurse for every 6.73 patients.

Average monthly wage for all persons employed, \$36.23; for nurses, \$26.20; men, \$29.17; women, \$23.95.

Extract from Trustees' Annual Report.

There have been reported to and investigated by the trustees many more cases of injury to both patients and attendants than ever before. Besides these there have been many cases reported by the staff and investigated by the superintendent. After an experience of over two years we cannot but believe that this is almost entirely due to the practical application of the so-called non-restraint law, chapter 589, section 1, *et seq.*, of Acts and Resolves of 1911. The effect of the enforcement of this law is mischievous in many ways. Excitable patients may be somewhat violent but not show "extreme" violence. They are liable from their very excitability to physically injure themselves, or they irritate, annoy and provoke other patients until some one retaliates. There is a struggle, and before an attendant can interfere some damage is done. There is no way to prevent this except in a multiplicity of attendants, the expense of which would be prohibitive to the State. Again, excitability "feeds upon itself." The freedom to become excitable makes some more prone to become excitable and to exhaust themselves thereby. For such cases mechanical restraint, either by camisole or bed sheet, is a beneficent and beneficial form of treatment. The influence of this act upon the attendants is to make them timid and, consequently, when it becomes necessary for them to take hold of a patient to restrain him from doing damage, that very fear undoubtedly unconsciously makes them manage a patient more strenuously than they would do if they knew that such a patient could, if necessary, be mechanically restrained. The act says these forms of restraint shall be used only in cases of "extreme violence," but it does not define the word "extreme," and who is to decide what is the final

court of appeal? Apparently, the interpretation is left to the discretion of the superintendent or staff physicians; but what physician can calmly or wisely exercise such discretion with a penalty of from \$50 to \$300 hanging over his head, provided his discretion is not approved by trustees or State Board or Executive and Council or by the yellow press? The word "extreme" should be stricken from the act and the words "or excitability" should be inserted after the word "violence," and its application left to the discretion of superintendent and staff. They are not hirelings; they are educated gentlemen who have studied and are constantly studying these cases. They know the individual better than any one else; they have his welfare at heart; upon their success in the care and cure of these cases depends their hope of advancement and the possibility of realizing their ambition to achieve a good reputation among their professional confrères and the community for the management of this class of fellow beings. They are to be trusted; why, then, should the Commonwealth not trust them? An act, the compliance with the conditions of which is more or less discretionary, does not require a penalty for its enforcement. Such legislation is unnecessary, and has proved to be unfortunate and disastrous.

Extract from Superintendent's Annual Report.

One of the most vital problems connected with the management of an institution of this kind is the difficulty in procuring competent, efficient nurses and attendants to care for our patients. It is a problem, the solution of which, up to the present time, is most unsatisfactory. We have, on our wards, men and women who are deserving of and have our utmost confidence and respect. They are those employees who are doing very difficult daily tasks on the ward with conscientiousness, devotion, loyalty and ability which commands our highest praise, but unfortunately there creep in a certain number who fall far below our standard. There is no one thing which will improve these conditions. First, I believe we must pay more money. For some time it has been impossible for us to keep the ranks of our women nurses filled, there not being sufficient applicants for this position, even though we go to the Free Employment Bureau and other agencies. We pay our nurses, on the present scale, no more than we would pay a waitress or a cook; in fact, not as much as we pay a cook. We do, however, give them a course in training so that they are able to take up a more remunerative employment later, but we do not have money to pay our graduates enough to keep them in the employ of the hospital after they obtain their diplomas. . . .

On the men's wards we have had in the past few months much difficulty in obtaining men for these positions. They do not remain long.

During the year ending Nov. 30, 1913, we averaged 80 attendants. To keep up this average required 286 individuals during that time; 45 of these employees were entitled to a vacation, with pay, during the year, —that is, had been employed six months or longer,—showing that while there is a nucleus which remains with us month after month, there is also a large percentage composed of men remaining but a short while, who take the position only to tide over leisure time in their business, or because they have to get something to do. One hundred and six men were discharged; 26 of these on account of indulgence in alcoholic liquor. This is a large percentage, unfortunately, but it must be borne in mind that the men at the hospital are under constant surveillance; that is, they live upon the grounds, and if they return home under the influence of liquor, or are found to have alcoholics in their room, they are discharged, whereas the manufacturer or the business man knows little of what his employees do so long as they report for work in the morning in a satisfactory condition, able to perform their duty. I doubt if the amount of drinking among the attendants is greater than among men earning a similar amount of money in any walk of life; in fact, I am inclined to think it is somewhat smaller. Many of these men, had they been employed in a store or in a factory, would have appeared for work on time in the morning and carried out their tasks satisfactorily; with us they are obliged to leave the service.

It must be remembered that we pay our attendants for the first two years no more than we pay a teamster or a farm hand, and yet place upon them duties which are most exacting in their demands, requiring tact, intelligence, patience and care. It is not sufficient money; there is no inducement for them to remain in this line of work unless we are permitted to have more money to give them. The charge nurses in particular should receive a marked increase in pay, and more than that, they should be, as it were, set aside from the other men in quarters, table and in their appearance. The added responsibility of the charge nurse's duty should carry with it added privileges. More attention should be given to the social side of the attendant's life; that is, there should be a chance for those who are married to have some home life, and there should be some pleasant place where the attendants and employees could meet for recreation. I think we have, as a rule, given too little attention to this side of the life of our employees. . . .

During the latter part of the year it seemed opportune for us to begin to board out patients directly from the hospital, which work has been undertaken in connection with our field work, under charge of Dr. Guibord. We have done a little in this line during the past year, and we expect to extend this service much more during the coming year.

BOSTON STATE HOSPITAL.

Opened in December, 1839. Present capacity, 1,287; increase for the year, 133.

Valuation of plant, per capita of capacity, \$1,864; real estate, \$1,749; personal, \$115.

Daily average number of patients, 1,301 (insane, voluntary sane and inebriate, 1,281; temporary care, 20).

Number Oct. 1, 1913, 1,317 (insane and voluntary sane, 1,293; temporary care, 24).

All commitments, *exclusive of temporary care*, 1,091; increase for the year, 121.

Temporary-care admissions, 1,022; increase for the year, 477.

Commitments as insane, 965; increase for the year, 314.

First cases of insanity, 792; 82.07 per cent.

Voluntary admissions, 448.

Emergency commitments, 18.

Commitments as inebriate, none.

First Cases of Insanity.

Native-born patients, 53.54 per cent.; mothers, 25.15 per cent.; fathers, 24.10 per cent.

Age sixty years or over, 18.78 per cent.

Resident in cities or large towns, 97.98 per cent.; country districts, 2.02 per cent.

Previous duration of insanity, under six months, 54.39 per cent.

Curable forms of insanity, 22.47 per cent.

Causes: congenital, .63 per cent.; hereditary, 9.47 per cent.; alcoholic, 21.46 per cent.; senility, 16.04 per cent.; coarse brain lesions, 16.67 per cent.; syphilis, 14.02 per cent.

Recoveries of the Insane.

Whole number, 152; 15.75 per cent. of commitments.

Recoveries of first cases of insanity, 116; 14.65 per cent. of first cases.

Recoveries in curable group A, 95; 53.37 per cent. of such curable cases.

Deaths of the Insane.

Whole number, 216; 9.89 per cent. of whole number of persons treated.

Curable forms of mental disease present in 12.96 per cent.; tuberculosis in 8.80 per cent.; senile insanity in 15.74 per cent.; general paralysis in 25.46 per cent.; coarse brain lesions in 20.83 per cent.

Finances.

Expenditures from maintenance funds, \$404,287; total receipts, \$42,255; being \$26,709 from private patients, \$12,662 from reimbursing patients, \$2,884 from other sources.

Weekly per capita cost of maintenance computed on net expenses, \$5.89.

Weekly per capita cost of whole service, \$2.74; ward service, \$1.11.

One person employed for every 3.28 patients; 1 nurse for every 5.76 patients.

Average monthly wage for all persons employed, \$38.98; for nurses, \$27.81; men, \$30.39; women, \$26.41.

*Extract from Superintendent's Annual Report.**Summary of New Features, Improvements and Additions.*

More women nurses employed in men's wards; the training school course extended and the school affiliated with a general hospital; increased compensation for graduate nurses and experienced attendants; opening of male attendants' home and quarters for married attendants; employment of a social worker; establishment of open wards for women patients; increase of industrial teaching force; introduction of physical training. Completion of refrigerating plant and new bakery and store-rooms; completion (within a month) of building for 120 patients; installation of new generator, centralizing electric light and power in one plant; commencement of building central heating plant, three cottages for patients and a reception building. Equipment of operating room; construction of fireproof vault for records; refitting two toilets and bathroom; exterior and interior painting, general repairs and minor improvements; putting eleven acres of additional land under cultivation; making lawns, planting shrubbery, etc. . . .

Most important of these and most satisfactory in its results has been a further extension of the policy heretofore adopted of placing the

quiet and infirm classes of male patients under the charge of women nurses. Practically all the nursing in our infirmary wards, containing 180 male patients, is now done by women, only 4 men attendants being employed in this service for day duty and 2 at night, while there are 18 women. Women nurses, graduates, are in charge of all of these wards, and their principal assistants are women, the men acting more in the capacity of orderlies, helping the nurses by lifting helpless patients, attending to the bathing, etc. Besides these we have 4 women nurses on the wards for quiet, able-bodied men, where their influence is decidedly beneficial.

The privilege of parole on the grounds and residence in open wards, long enjoyed by male patients for whom this degree of liberty is practicable, has this year been extended to the women of corresponding type. Two wards containing 60 convalescent, semi-convalescent and mild, chronic patients now have the doors unlocked from morning till night, and the patients go out and in at will, enjoying the unrestricted use of the pleasant grounds adjoining, and deriving unmeasured satisfaction from the removal of irritating, and as the event proves, unnecessary supervision. With still better facilities for classification as new buildings are added to the plant, it is hoped to make this kind of "non-restraint" even more a feature of our treatment than is at present possible. . . .

Nursing Staff.

Recognizing the obvious fact that upon the character and efficiency of the nurses and attendants more than upon any other factor depend the safety and comfort of the patients as well as, to a large extent, their chances of recovery, continued earnest efforts have been made to enhance the quality of the nursing corps. Our special desire has been to retain in the service of the hospital those who have satisfactorily completed the course in the training school and others who have shown themselves worthy. A slight increase of pay in the higher grades,—for graduates and experienced attendants,—the opening of an attractive and comfortable home for the men, and provision of separate quarters for married attendants, are measures which have given encouraging results in this direction, which we hope to see amplified by further increase of compensation and the erection of additional quarters for women nurses and married couples, for which appropriations are asked this year. . . .

Social Service.

Following out the recommendation made in a previous report, which was indorsed by the trustees, provision was made this year for social service, including "after care" of discharged patients, on the basis of a definite organization for that work instead of dependence upon re-

ports from their families and the giving of advice to such as would call at the hospital or write to the physicians.

A social worker was engaged — a graduate nurse with experience as a hospital visitor and technical training in social service methods — who, in close co-operation with the physicians, searches out the varied needs of the patients and their families, and seeks to furnish help in ways as various as the situations which demand it.

The homes of patients are visited, and by tactful inquiry and observation information is sought regarding the source and amount of the family income, the habits and health of its members, the number, age and development of the children, the care that is given them, etc. Much information is thus gained, throwing light on the causes of the patient's mental breakdown, and material aid is given according to the need shown, — it may be merely encouragement and advice; it may be reference to a suitable agency for the relief of distress, sending a tubercular member to a hospital or a sick child to the country. At the very least it is a grateful show of interest and of desire to be of service, which is but rarely unappreciated.

Patients discharged on trial are visited and their condition and progress noted; advice given as to employment, manner of living, etc.; return to the hospital arranged for if necessary. Inspection is made of homes to which it is proposed that patients shall go when discharge is being considered; relatives and friends are hunted up and efforts made to get suitable cases removed from the hospital and cared for elsewhere; positions are found for recovered patients dependent upon their own resources for maintenance; boarding places are looked up for the homeless. There is an infinity of things the social worker can do to straighten out the tangles of these interrupted lives.

It is too early to judge numerically the results of the undertaking, but we feel that they are encouraging, and doubtless the field will widen as experience shall show the best ways of handling the complex problems involved. . . .

New occupations, introducing greater variety and most of them supplying as product something of practical use, are constantly being tried out in the industrial rooms, where the maintenance of keen interest by both instructors and patients furnishes pleasing evidence that the right note has been struck. In the wards the same thing is true, though not to the same extent, for the obvious reason that there this particular kind of treatment cannot be kept so prominently to the fore by the nurses, who find other interests and duties demanding their divided attention. More nurses, with better training for this work and a differentiation of duties permitting closer application to it, will probably prove to be the solution of this difficulty.

Extract from Director's Annual Report (Psychopathic Department).

The problem of being ready to receive as many as a dozen new insane patients in a day, and of actually receiving seldom less than three or four during a day, involves having an experienced receiving officer at hand at all times, which has meant in point of fact having an "officer of the day" in rotation, each man becoming officer of the day again on the third or fourth day. No one officer can be found with a memory and patience long enough to be *au courant* of every case. A practical system of aids to the memory had to be evolved to insure notification of friends and physicians concerning changes of medical condition and legal status. . . .

A proper supervision of all these rapidly changing affairs is managed by means of 8 to 9 o'clock morning rounds by the staff in charge of its chief. On these rounds all the major alterations of medical status in each patient are considered, and the hospital is of such a size (110 beds to run, at 100 patients more or less) that it is feasible for each officer to know enough of all cases to insure a broad experience for himself and that advantage to the patient which offhand observation often brings. These morning rounds tend to detect fatigue or prejudice in the various physicians, and they are especially serviceable in doing away with the secretive habits which some physicians affect of "carrying things in their heads" instead of committing them to the records. Among the physicians there will usually be found one who is especially somatic, or especially neurological, or perhaps psychological, or, if the hospital be fortunate, some physician more therapeutic in his interests than the recent medical graduate is apt to be; and accordingly these medical rounds serve to spread the different doctrines freely about. On the other hand, aimless discussion is prevented by the chief of staff who is supposed to have weathered the storms of prejudice. . . .

The morning hours from 9 to 12 and the afternoon hours are occupied by routine examinations and set treatment of patients. The examinations in a psychopathic hospital must be of a more elaborate nature than those of other hospitals for the insane, both in the interest of the patient in hand and in the interest of future patients. The advantage which a patient derives from examination at a psychopathic hospital or psychiatric clinic is not fully understood as yet even by all medical men, although the lay public seems to take the clinic's superiority on faith. I think the advantage may be said to consist (1) in that the patient's condition is studied by more expert minds, at any rate by numerically more men, than could be readily got together elsewhere, and (2) in that these examinations are carried out more speedily

than they would otherwise be. We should all be ready to grant that, once the condition is determined, certain cases can be as well or better treated elsewhere than at a psychopathic hospital. . . .

Before speaking systematically of the nursing problem, I should conclude the diagnostic discussion by mentioning the daily staff meetings which last an hour every week day from 12 M. to 1 P.M. With the exception of the Wednesday meeting, which is now devoted to a public clinic for Massachusetts practitioners, these daily meetings are devoted to cases which are especially interesting from the standpoint of classification or treatment, or are cases which routine study has left "unclassified." It is at these meetings that the director secures the maximum effect upon the staff. There the latest novelties in diagnosis and treatment are discussed, and digests from recent literature are introduced. The meetings are held in the hospital library, where immediate reference can be made to available books and periodicals. The past year has been largely devoted to a critique of the latest edition of Kraepelin's "Psychiatrie," 1909-13. The diagnostic notes obtained from analysis of this textbook, as well as of other books and periodicals, are collected in typewritten form. . . .

The State Board of Insanity, in its report for 1910, stated with respect to the Psychopathic Hospital: —

Clinical instruction should be given to medical students, the future family physicians, who would thus be taught to recognize and treat mental disease in its earliest stages, when curative measures avail most. Such a hospital, therefore, should be accessible to medical schools, other hospitals, clinics and laboratories.

It should be a center of education and training of physicians, nurses, investigators and special workers in this and allied fields of work.

Accordingly, the Psychopathic Hospital has, so far as its own diagnostic and therapeutic work would permit, thrown its work open to the inspection of properly accredited persons. In the first place, the daily staff conferences mentioned in the section on hospital management have continued to attract visitors from the metropolitan district and elsewhere in Massachusetts, as well as some from a distance. In order to dispel the feelings of the public concerning the weird and uncanny nature of insanity, various laymen have been permitted to come to these clinics upon special request.

The Wednesday noon clinic was pitched upon as the most suitable one in which to give instruction to physicians already in practice. The method has been so successful in its brief time of operation at this writing that there is no doubt of its continuance. Wednesday clinics of a given month are devoted largely to examples of the classical entities. The October meetings were, for example, devoted to general paresis, the November meetings to alcoholic mental disease, and during December it is contemplated to deal with dementia praecox. Other

classical entities will follow. In these clinics the diagnostic features of the various entities are discussed in some detail, and the method of diagnosis is entered into with the use of blackboards showing the differential points in diagnosis. Thus, whereas the other daily meetings deal rather with the obscure and unclassified cases, the Wednesday meetings deal with more definite entities. These meetings are attracting an increasing number of practitioners.

A somewhat similar device for educating the community has been adopted by setting apart the hour 5 to 6 P.M. upon each Friday for a social clinic, to which the heads of various social agencies and their assistants are invited. The history and the actual patient are, as a rule, both introduced. Patients suitable for demonstration are carefully chosen with an eye to seeing that the patients do not themselves suffer. In the majority of instances the patients are actually helped by the clinic, in that they are made to see the nature of the problems which they present and yet are not overborne by the legal authority which a court appearance would assert. Some of the most instructive cases, from the standpoint of diagnosis and disposition, are in fact cases of delinquency or suspected delinquency, in which the clinical demonstration is far less of an ordeal than would be an appearance in court. As a rule, over 40 social workers have appeared at the social clinics so far carried on. Amongst these workers will appear, as a rule, persons greatly sympathetic with the patient, and the "third degree" aspect of the meetings is reduced to practically nil. We may hope for a great advantage to accrue from the assimilation by social workers of some portion of the medical point of view. It is to be feared that in the past social workers have regarded physicians, and particularly physicians in the State service, as hardly sympathetic with the modern social service point of view. This opinion is likely to be dispelled by these clinics.

In addition to the daily conferences upon difficult and unclassified cases, the Wednesday clinics for physicians upon the classical entities, and the social clinics upon Friday afternoons for free discussion of medical and social problems, the hospital has sought to be an educational center in other ways. I will mention the set of lectures whose titles are given in section VII.; also the two formal conferences — the first annual conference, held June 24, 1913, and the conference upon aleoholic mental disease, held Nov. 24, 1913 — which have attracted an attendance of the best sort, including both medical and social workers. The aleoholic conference was especially stimulating in that the audience contained both alienists, prominent general practitioners, prominent social workers and various representatives of the penal system of the State. The Harvard, Tufts and Boston University Medical schools have availed or will avail themselves of the clinic for their students.

Endeavor has been made by means of publications, largely in local journals, to stimulate local interest and backing for the Psychopathic Hospital enterprise.

WORCESTER STATE ASYLUM.

Opened in October, 1877. Present capacity, 1,342; increase for the year, 123.

Valuation of plant, per capita of capacity, \$1,112; real estate, \$1,015; personal, \$97.

Daily average number of patients, 1,223; increase for the year, 42.

Number Oct. 1, 1913, 1,330.

Admitted by transfer, 261; increase for the year, 219.

Deaths of the Insane.

Whole number, 65; 4.60 per cent. of whole number of persons treated.

Tuberculosis was present in 16.92 per cent.; senile insanity in 6.15 per cent.; general paralysis in 6.15 per cent.

Finances.

Expenditures from maintenance funds, \$290,811; total receipts, \$10,612; being \$8,067 from reimbursing patients, \$2,545 from other sources.

Weekly per capita cost of maintenance computed on net expenses, \$4.41.

Weekly per capita cost of whole service, \$1.79; ward service, \$0.60.

One person employed for every 4.80 patients; 1 nurse for every 9.57 patients.

Average monthly wage for all persons employed, \$37.25; for nurses, \$25.21; men, \$26.80; women, \$23.84.

Extract from Superintendent's Annual Report.

The social work of the institution has been conducted by a member of our medical staff. She has made numerous visits to the homes of relatives and friends to ascertain the general conditions of the different families who were contemplating taking home an inmate who had become much improved; and if the surroundings were found suitable the

patient was sent home on visit. Her visits to the different homes, no doubt, have been very beneficial to the homes as well as to the institution in creating a better feeling towards the institution. . . .

We had 270 admissions during the year, or 225 more than last year, so that the institution is filled to its capacity. We have had a large number of boarding-out cases sent to us, but the greatest number have been received by transfer from the other institutions. The type of patient has greatly changed. Instead of receiving an average number of quiet and semi-industrious cases we are receiving end results in the form of violence, turbulence and destructiveness, and the care of this class of patient becomes more trying and exacting, in order to prevent accidents and violence. The character of the patients admitted has slightly reduced the percentage of occupation, so that the per cent. of persons at work or occupied in some form of industry has dropped from 74.11 last year to 68.9 per cent.; yet our actual number of patients working was materially larger than the previous years. I strongly urge that the old custom of transferring patients from the hospitals to the asylums should be discontinued, and that all the institutions should be made reception hospitals, so that the patient might be admitted to the institution located in his district and remain there. I believe that if the State could be redistricted and a psychopathic hospital located in the central district, namely, Worcester County, and one in the western district, in Springfield, all of the central district could be taken care of in the two Worcester institutions and Gardner.

To reduce the amount of violence on the wards we should consider smaller units. I believe that a strong building of fireproof construction to care for not more than 20 or 25 patients should be erected in each of our custodial groups, male and female, so that the violent, homicidal and the moral imbecile could be removed from the larger wards, where they are and have always been a disturbing element. I believe that this would greatly reduce the amount of violence and accidents on our large and overcrowded wards. . . .

The garden work started last year was still more successful this year, many of the patients occupying all of their time in improving their small plots and helping those nurses who entered into the plan with much interest. More than 50 bushels of the different kinds of vegetables were raised, of cucumbers alone more than 14. All of these vegetables were allowed the patient or nurse who prepared the same for her own use, or placed them in the kitchen where they were prepared for other patients as well. Because their work was so successful the past year a still larger area will be prepared this coming year. We shall attempt to have a more uniform plot for each patient and nurse. A number of patients working in this garden were recruited from the out-of-door working crew. The largest number of female patients working out of doors during any one day was 33.

MEDFIELD STATE ASYLUM.

Opened in May, 1896. Present capacity, 1,542.

Valuation of plant, per capita of capacity, \$1,157; real estate, \$1,048; personal, \$109.

Daily average number of patients, 1,689; decrease for the year, 16.

Number Oct. 1, 1913, 1,697.

Admitted by transfer, 124; decrease for the year, 110.

Deaths of the Insane.

Whole number, 114; 6.17 per cent. of whole number of persons treated.

Tuberculosis was present in 14.91 per cent.; general paralysis in 4.39 per cent.

Finances.

Expenditures from maintenance funds, \$357,578; total receipts, \$14,171; being \$12,347 from reimbursing patients, \$1,824 from other sources.

Weekly per capita cost of maintenance computed on net expenses, \$4.05.

Weekly per capita cost of whole service, \$1.62; ward service, \$0.71.

One person employed for every 4.67 patients; 1 nurse for every 8.75 patients.

Average monthly wage for all persons employed, \$32.94; for nurses, \$27.12; men, \$30.09; women, \$25.42.

Extract from Trustees' Annual Report.

During the year a number of men and women have been sent home on trial visits, a few of whom proved able to remain. Ten women have been boarded out by the State Board of Insanity.

The industrial activities of the institution have been stimulated by the intelligent labors of the industrial supervisor. The many lines of endeavor previously initiated by the superintendent and his staff have been carried forward and new ones established.

An interesting census taken in January showed that 46 different kinds of occupation were being carried on, 1,392 patients being em-

ployed from one hour upward; while during the summer months, when outdoor labors could be carried on, many more were employed during single days. . . .

The transforming the institution from an asylum to a hospital has been carefully discussed in our meetings, and a conference has been held with the State Board of Insanity. There is no stimulation either to patient or those caring for the patient in the asylum idea. The elimination of hope is depressing to relatives and friends, and works disastrously for the patient. It is less inspiring to the physician to labor for those who have abandoned hope of betterment, for custodial care alone tends to monotony of attitude and dullness of endeavor throughout the whole range of workers in an institution. The cottage system and the construction of the present buildings lend admirably to hospital needs, and the transition could easily be made for the good of all. We therefore unanimously recommend that such measures should be taken as will bring about the desired change in the near future.

Extract from Superintendent's Annual Report.

In spite of the improvement in the hours of employees there has been, during the summer, a shortage both of men and women in the ward service. This is not as great as it has been in past years, but no great improvement is noticeable in this respect. I feel that some radical step should be taken to remedy this fault in the nursing service, and to attract a larger number of applicants, both men and women, so that more choice can be exercised in selecting attendants and nurses for these very important places. The work is confining and disagreeable in its nature, and must from necessity always be so. The wage is lower than that paid in most industries outside of institutions that care for the insane, notwithstanding the fact that this outside employment is much pleasanter and offers greater independence and freedom to the employee. I believe that one of the first steps to be taken to remedy this condition is to increase wages so as to make the work attractive at least from the wage standpoint. Your committee on maintenance has increased accordingly the amount asked from the Legislature for the payment of salaries and wages for the coming year, in the hope that an increase will bring about the desired result. . . .

On October 9 a class of 6 nurses graduated from the training school. These young women have had, in addition to the two years' course at Medfield, six months in the Boston City Hospital. I believe that the pay of the graduates of the training school should be increased to such an amount as to retain their services for the asylum. As it is, they can almost immediately get more money than the asylum has been able to pay them. The result has been that they leave the service very soon after graduation. The institution has the benefit of their services for

two years, and no doubt the training increases the morals and elevates the standard of the nursing throughout the institution, even if they do not remain.

GARDNER STATE COLONY.

Opened in October, 1902. Present capacity, 681; increase for the year, 31.

Valuation of plant, per capita of capacity, \$963; real estate, \$812; personal, \$151.

Daily average number of patients, 682; increase for the year, 11.

Number Oct. 1, 1913, 681.

Admitted by transfer, 68; decrease for the year, 3.

Deaths of the Insane.

Whole number, 14; 1.85 per cent. of whole number of persons treated.

Tuberculosis was present in 42.86 per cent.; general paralysis in 7.14 per cent.

Finances.

Expenditures from maintenance funds, \$141,494; total receipts, \$2,813; being \$1,042 from reimbursing patients, \$1,771 from other sources.

Weekly per capita cost of maintenance computed on net expenses, \$3.93.

Weekly per capita cost of whole service, \$1.60; ward service, \$0.54.

One person employed for every 5.45 patients; 1 nurse for every 11.57 patients.

Average monthly wage for all persons employed, \$37.91; for nurses, \$27.35; men, \$29.59; women, \$21.95.

Extract from Trustees' Annual Report.

We have constructed the cottages for 16 patients each, and they are now occupied. They have the advantage not only of a low per capita cost (\$350), but give to those patients who are fitted to occupy them greater privacy and nearer approach to normal methods of living than have yet been obtained in larger buildings. With increased knowledge on the part of the public of methods of caring for the quiet insane,

and with an increase in the visiting force of the State, it may be possible to graduate patients of this class to their own homes, where they still have relatives able to care for them. We are therefore asking for two more cottages of this character.

In order to give further opportunities for normal life the trustees deem it important to provide some commodious meeting place, both for religious services and for the social meetings of the patients and attendants. We ask for a chapel and meeting hall, to be erected near the main group of buildings.

While we do not ask this year for further accommodations for officers and attendants, the trustees expect in the near future to ask for a few small cottages where men may live with their families while employed by the colony. It is beginning to be evident to all that intelligent and earnest people are not content to devote their lives to the care of the insane if they themselves are given no opportunity to live apart from those under their care. The single man and woman must be depended upon for a large share of the care of insane patients, but the Commonwealth should be prepared to retain the services of valued employees by offering not only decent pay but accustomed methods of living. Only in such way can intelligent supervision and a competent teaching force be secured.

MENTAL WARDS, STATE INFIRMARY.

Opened in October, 1866. Present capacity, 673.

Valuation of plant, per capita of capacity, \$776; real estate, \$660; personal, \$116.

Daily average number of patients, 719; decrease for the year, 14.

Number Oct. 1, 1913, 710.

Commitments as insane, 66; increase for the year, 1.

First cases of insanity, 59; 89.39 per cent.

Admitted by transfer, 33; decrease for the year, 18.

First Cases of Insanity.

Native-born patients, 40.68 per cent.; mothers, 25.42 per cent.; fathers, 27.59 per cent.

Age sixty years or over, 27.12 per cent.

Resident in cities or large towns, 91.53 per cent.; country districts, 8.47 per cent.

Previous duration of insanity, under six months, 30.51 per cent.

Curable forms of insanity, 8.47 per cent.

Causes: congenital, 18.64 per cent.; hereditary, 22.03 per cent.; alcoholic, 11.86 per cent.; coarse brain lesions, 27.12 per cent.; syphilis, 3.39 per cent.

Deaths of the Insane.

Whole number, 71; 8.59 per cent. of whole number of persons treated.

Curable forms of mental disease present in 4.23 per cent.

Tuberculosis was present in 22.54 per cent.; senile insanity in 22.54 per cent.; general paralysis in 7.04 per cent.

Extract from Superintendent's Annual Report.

The treatment of syphilis with Ehrlich's arsenical preparations mentioned in the last report has continued through the year. Prior to this report 230 cases were treated with salvarsan, and a total of 441 doses was given. Of these, 17 patients have applied for further treatment with the recurrence of syphilis. This amounts to a percentage of 7.39, in 3 of which cases there is possibility of reinfection. During the present year 260 patients were treated with neo-salvarsan, requiring a total of 760 doses. During this time 2 patients have returned with recurrence of symptoms. We draw the following conclusions from the above-mentioned cases:—

1. That it is our most powerful agent in combating syphilis.
2. That we are still unable to guarantee a cure by the use of these agents, for recurrences are altogether too frequent, considering what was first expected of them.

3. We can probably cure a larger percentage of cases with salvarsan and neo-salvarsan than with any other remedies we possess.

4. By the use of these new agents we are able to isolate and treat all of our syphilites, until all of the open lesions are healed, within our general hospital wards, which would have been impossible under the older methods of treating syphilis, on account of the marked increase in the syphilitic clinic. . . .

The buildings in which the insane patients are housed form practically a distinct group, occupying the southernmost portion of our grounds. The organization and the administration of this department are distinct from the others, so that it is nearly like an independent establishment. The patients who are able, however, as has always been the case, contribute very largely to the operation and economy of the whole institution by doing such work as it is suitable for them to perform in general housekeeping, laundry, kitchen and work on the farm, stable and

grounds. Our patients cannot only do that which they would necessarily do in relation to the running of their own department, but are also able to do, at the same time, a much larger amount of the same work for the other departments, at the various points where large amounts of work can be centralized in the institution, of which numerically they make up but one-third of the population; the other two-thirds of which — occupying the general hospital, tuberculosis, house and convalescent departments — are mostly patients physically able to render but little aid in the necessary daily activities of the large institution. Briefly spoken, our insane patients, without prejudicing their own well-being, can and do render much service for the welfare of others, which is also an essential to the real treatment and to the general happiness of themselves.

Apart from the occupations above suggested, a great deal of industrial work is performed by the insane patients, under the direction of nurses and instructors, on lines especially devised to attract the attention and maintain the interest of those who would otherwise remain unoccupied, or others whose restlessness would be exerted along destructive or mischievous lines. A kindergarten teacher and one more industrial teacher have been added to the women's department during the year. . . . A series of receptions and entertainments in the different wards has been conducted during the greater part of the year, in which certain groups of the patients act as hostesses and prepare the entertainment, a matter in which they take far greater interest than in such affairs as are provided for them by others. . . .

In the early part of the present year the books forming the general library were removed from the administration building to shelves set up for their accommodation in the recent addition to the chapel. At the time of their removal the entire number of books handled was 2,098 volumes. Since that time there have been added by purchase 491 volumes, by donation 72 volumes, making a total of 2,661 volumes. Of this number there have been placed in different wards, and at the school in bookcases specially provided, 376 volumes for permanent use in such parts of the institution. The circulation of the books from the new location of the library began on the twenty-fifth day of March, and a steady increase in the use of books has been observed.

BRIDGEWATER STATE HOSPITAL.

Opened in September, 1886. Present capacity, 818; increase for the year, 20.

Valuation of plant, per capita of capacity, \$644; real estate, \$499; personal, \$145.

Daily average number of patients, 783; increase for the year, 21.

Number Oct. 1, 1913, 800.

Commitments as insane, 103; increase for the year, 15.

First cases of insanity, 79; 76.70 per cent.

Admitted by transfer, 4; decrease for the year, 1.

First Cases of Insanity.

Native-born patients, 49.33 per cent.; mothers, 25.68 per cent.; fathers, 24.32 per cent.

Age sixty years or over, 6.67 per cent.

Resident in cities or large towns, 84.81 per cent.; country districts, 15.19 per cent.

Previous duration of insanity, under six months, 30.19 per cent.

Curable forms of insanity, 13.92 per cent.

Causes: congenital, 8.86 per cent.; hereditary, 11.39 per cent.; alcoholic, 49.36 per cent.; senility, 2.53 per cent.; coarse brain lesions, 1.27 per cent.

Recoveries of the Insane.

Whole number, 24; 23.30 per cent. of commitments.

Recoveries of first cases of insanity, 20; 25.32 per cent. of such first cases.

Deaths of the Insane.

Whole number, 32; 3.62 per cent. of whole number of persons treated.

Curable forms of mental disease present in 3.13 per cent.

Tuberculosis was present in 21.88 per cent.; senile insanity in 9.38 per cent.; general paralysis in 18.75 per cent.; coarse brain lesions in 9.38 per cent.

Extract from Medical Director's Annual Report.

The medical work has been carried along the lines adopted last year, — each new patient is made a subject for study by the physician assigned, who later presents the case at the staff conference, when the diagnosis, prognosis and treatment are discussed. All patients discharged are similarly brought before the staff.

We are considerably handicapped by our inability to obtain family and personal histories, especially of the court cases, which are committed without an accompanying medical certificate. Frequently, the

officers bringing these cases know little or nothing about them, and the only history obtainable must come from the patient. Histories so obtained are fairly reliable up to the onset of the psychosis, but usually throw little light on the beginning of the disease or the incidents leading up to the criminal act. These facts would be of great value in the study of the case and should be made available by law.

Individual care and extra diet have been given to all patients requiring special attention for either mental or bodily ills. A graduate nurse is giving attention to some of the old men, and two trained women attendants are in charge of the industrial room.

The feature of women attendants for the care of male patients is a comparatively recent innovation in the civil hospitals, where the results obtained are most beneficial for patients and employees alike, but little or no attempt has been made to place them on wards for the criminal insane. A woman's presence adds a touch of the human element and sympathy, which the majority of the opposite sex do not possess. With the exception of the hospital, no attempt has been made to place female attendants on our so-called back wards. Women qualified by age and experience are extremely scarce and still more difficult to obtain. We should, I believe, add gradually to our force of women attendants, and eventually have them in charge or at least present in all but the most turbulent wards. Our experience thus far has shown that a woman's presence commands the respect of the majority of patients, and that there are very few who are not more careful of their language and conduct. . . .

The insane criminal is not characterized by love of industry, except in his own chosen lines of endeavor, and restraint does not tend to develop that which is inherently lacking. He has made a livelihood at the expense of society and, now that society has a claim on him, he feels that a living is still due him; exceptions only tend to prove the rule. Our most difficult problem, however, is not the man clearly insane but the malingerer under a long sentence, desirous of liberty at any price, and the defective on the border line between responsibility and irresponsibility. These men working together, taking advantage of every opportunity, making cat's paws of the inoffensive and harmless, keep the whole hospital in a state of unrest and apprehension. It is not always easy to detect these cases, although we may have "sized them up" properly on admission. Until the element of doubt is eliminated we must regard them as diseased, and so far as possible treat them as sick patients and not as sane convicts responsible for their acts. The law-abiding citizen who commits a criminal act because of mental disease represents a different type and is far more tractable. Many of these are inoffensive, and may be employed at any occupation which their intellectual powers permit. . . .

Our population represents a distinct class not found in the ordinary

hospital,— a class combining the deceit, knavery and all-round crookedness of the criminal with that of the mind warped and distorted by disease. We and our attendants must match our wits against the insane criminal, and the criminal faking insanity, in order to smooth out his own pathway while under confinement or to accomplish a much-desired escape. Only an experienced man can expect to compete successfully with such men. In the trades, experience and skill are compensated, but in our hospitals experience counts for little so far as a monetary return is concerned.

I believe we should offer a reasonable wage at the start as an inducement to enter the service, and a scale of advancement sufficient to render the work attractive to reliable men, whose experience, stability and qualifications have been demonstrated.

I recommend that the following scale be adopted:—

For the first six months,	\$.30
For the next twelve months, . . . . .	.35
For eighteen months and over, . . . . .	.40
For the charge men, . . . . .	.50

Approximately \$5,000 will cover such an increase.

MONSON STATE HOSPITAL.

Opened in May, 1898. Present capacity, 853.

Valuation of plant, per capita of capacity, \$973; real estate, \$807; personal, \$166.

Daily average number of patients, 905; increase for the year, 34.

Number Oct. 1, 1913, 922.

Insane commitments, 27; decrease for the year, 19.

First cases of epilepsy, 183; being 88.83 per cent. of all epileptics received.

The general statistics for the year are:—

	INSANE.			SANE.			TOTALS.				
	Males.		Females.	Males.		Females.	Totals.	Males.	Females.		
	176	176	352	281	254	535	457	430	887	147	129
Patients in the hospital Oct. 1, 1912,	28	11	39	119	118	237	147	129	276	10	10
Admitted within the year,	20	7	27	20	3	23	40	40	50	86	86
Viz.: by commitment,										156	156
by transfer,										241	241
from transfer,										93	93
from escape,										42	42
Nominal admissions for discharge,										1	1
Viz.: from visit,										1,163	1,163
from escape,										241	241
Whole number of cases within the year,	204	187	391	400	372	772	604	559	1,163	133	133
Dismissed during the year,	25	21	46	108	87	195	133	108	241	52	52
Viz.: discharged,	4	4	8	48	37	85	52	41	93	41	41
as recovered,										19	19
as capable of self-support,										23	23
as improved,										14	14
as not improved,										22	22
died,										22	22
transferred,										65	65
on visit Oct. 1, 1913,										41	41
on escape Oct. 1, 1913,										27	27
Patients remaining Sept. 30, 1913,	179	166	345	292	285	577	471	451	922	5	5
Viz.: State patients,	167	155	322	275	258	533	442	413	855	17	17
private patients	2	3	5	13	14	27	14	14	32	21	21
reimbursing patients,										35	35
Number of different persons within the year,										1,114	1,114
Number of different persons admitted by commitment and voluntarily,	201	184	385	370	356	735	575	539	231	110	110
Number of different persons admitted by commitment and voluntarily,	25	8	33	98	102	200	121	110	231	5	5
Number of different persons dismissed,	20	7	27	88	89	177	107	96	203	88	88
Number of different persons dismissed,	22	18	40	88	71	159	109	87	197	196	196
Number of different persons discharged capable of self-support,	21	16	37	83	71	159	109	87	196	172	172
Daily average number of patients,										444	444
Viz.: State patients,	179	56	172	352	280	552	471	435	882	35	35
private patients,	171	27	163	93	335	245	89	64	845	23	23
reimbursing patients,										17	17
	3.01	3.00	6.01	12.23	14.21	26.44	15.24	17.21	32.45	26.91	26.91
	5.28	5.62	10.90	4.19	11.82	16.01	9.47	17.44			

¹ Four sane men discharged as sane and readmitted as insane; 1 male admitted as insane; 1 male twice admitted as sane; 1 sane female discharged as sane readmitted as insane.

² One male admitted twice as sane, discharged and readmitted as insane.

³ Two sane males admitted, discharged and readmitted as sane; 1 sane male discharged and readmitted as insane.

⁴ One sane male and 1 sane female discharged, readmitted as insane and transferred.

First Cases of Epilepsy.

Native-born patients, 75.95 per cent.; mothers, 36 per cent.; fathers, 42.04 per cent.

Mean age at onset of epilepsy, 14.11 years; when admitted, 24.32 years.

Resident in cities or large towns, 69.40 per cent.; country districts, 30.60 per cent.

Deaths of Epileptics.

Whole number, 65; 5.83 per cent. of whole number of persons treated.

Tuberculosis was present in 6.15 per cent.; epilepsy was the immediate cause of death in 33.84 per cent. Mean age at first attack of epilepsy, 16.4 years; at death, 33.07 years.

Finances.

Expenditures from maintenance funds, \$229,091; total receipts, \$16,307; being \$8,940 from private patients, \$3,886 from reimbursing patients, \$242 from towns, \$3,239 from other sources.

Weekly per capita cost of maintenance computed on net expenses, \$4.76.

Weekly per capita cost of whole service, \$1.92; ward service, \$0.75.

One person employed for every 4.82 patients; 1 nurse for every 10.10 patients.

Average monthly wage for all persons employed, \$40.21; for nurses, \$32.99; men, \$37.69; women, \$28.86.

Extract from Superintendent's Annual Report.

The care of our patients during this year has presented the same difficulties as in former years, and I am glad to say that these difficulties have been met in general with a proper appreciation of responsibility, so that we have no serious defections from duty to regret. I consider that our employees have been in general of a satisfactory grade. We have had attendants and nurses who have been especially faithful, and the few exceptions to this rule can only be regretted. We certainly cannot expect that we shall obtain the services we desire in every case.

The work of the medical staff has been carried on with special ability. We have not only been able to give personal attention in detail to the patients and their welfare, but we have been able scientifically to investigate a large number of conditions which have not before been inquired into. These investigations have been reported from time to time and will in the aggregate, as years go on, form a very valuable contribution to the therapeutics of epilepsy. Our library relating to this specialty has grown moderately during the year. It is already of good size, and of very decided value to us and to others for reference.

FOXBOROUGH STATE HOSPITAL.

Opened in February, 1893. Present capacity, 299.

Valuation of plant, per capita of capacity, \$1,191; real estate, \$996; personal, \$195.

Daily average number of patients, 414 (inebriates, 211; insane, 203); increase for the year, 15.

Number Oct. 1, 1913, 398.

Finances.

Expenditures from maintenance funds, \$103,161; total receipts, \$4,392; being \$1,132 from private patients, \$1,554 from reimbursing patients, \$248 from cities and towns, \$1,458 from other sources.

Weekly per capita cost of maintenance computed on net expenses, \$5.41.

Weekly per capita cost of whole service, \$2.24; ward service, \$0.45.

One person employed for every 4.59 patients; 1 nurse for every 17.03 patients.

Average monthly wage for all persons employed, \$44.60; for nurses, \$33.48; males, \$33.79; females, \$27.02.

Statistics regarding the insane will be found with those of other institutions for the insane, in the Appendix.

The general statistics for the year relative to inebriate are:—

Patients in hospital Oct. 1, 1912,	173
Admissions within the year,	1,276
By commitment,	196
By transfer,	—

Admissions within the year — *Con.*

By return from leave of absence of previous years,	25
By return from escape of previous years,	—
By return from visit of previous years,	31
Voluntary,	756
Nominally for discharge,	268
Whole number of cases within the year,	1,449
Final discharges within the year,	773
By death while in house,	8
By death while on leave of absence,	—
By death while on visit,	—
By death, escaped,	—
As insane,	7
By time limit while in house,	4
By time limit while on leave of absence,	57
By time limit, escaped,	1
As not to be benefited by further treatment while in house,	262
As not to be benefited by further treatment while on leave of absence,	6
As not to be benefited by further treatment while on visit,	5
As not to be benefited by further treatment while on escape,	—
Expiration of visit,	420
Deported,	2
Transferred,	1
Patients absent, not finally discharged, dismissed 1913,	487
Leave of absence,	165
Escaped,	—
Visit,	322
Patients absent, not finally discharged, dismissed in previous years,	64
Leave of absence,	63
Escaped,	1
Patients remaining in hospital Sept. 30, 1913 (including Norfolk State Hospital),	189
Viz.: State patients,	187
Private patients,	2
Reimbursing patients,	—

Number of different persons within the year,	1,149
Number of different persons admitted,	992
Persons admitted from community,	936
Persons dismissed,	975
 Daily average number of patients (including Norfolk State Hospital),	210.92
Viz.: State patients,	207.31
Private patients,	2.57
Reimbursing patients,	1.04

Inebriates.

Daily average number, 211.

Commitments, 196; increase for the year, 55.

Voluntary admissions, 756; increase for the year, 211.

Admitted for the first time to any institution for the treatment of inebriety, 593, or 62.29 per cent.

Admitted to this hospital for the first time, 751, or 78.88 per cent.; 161 for the second; 34 for the third; and 4 for the fourth.

First Cases of Inebriety.

Native-born patients, 80.02 per cent.; natives of Massachusetts, 66.84 per cent.; 31.29 per cent. of the mothers were native born; 29.69 per cent. of the fathers were native born.

Average age at which habit began, 24.21 years; when admitted, 38.06 years; 91, or 12.11 per cent., were over fifty years old when admitted.

Average known duration of inebriety before admission, 11.90 years.

Resident in cities or large towns, 678, or 90.28 per cent.; country districts, 73, or 9.72 per cent.

Two hundred and seventy-three were discharged as not to be benefited by further treatment.

Extract from Trustees' Annual Report.

The law permitting the admission of voluntary cases can no longer be regarded as an experiment. The experience of the past four years, since its enactment, has on the whole been exceedingly favorable, and demonstrates both the usefulness and economy of such provision. During the past year from Boston alone there have been received 479 volun-

tary cases. Prior to the passage of the voluntary law this would have involved an expense, for court commitment, transportation and other items, of approximately \$23 per patient, or a total of \$11,017. Under the present voluntary commitment plan the only expense incurred in the admission of these 479 Boston cases was for transportation, amounting in aggregate to \$263.45, showing a net saving in this single instance of \$10,753.55. . . .

The Board again commends the work of the out-patient department. The importance to the discharged patients of this branch of the hospital work cannot be overestimated, and the economy to the Commonwealth, resulting from the shorter stay of patients at the hospital made possible through this after-care and supervision, is no inconsiderable item. There has been added to this department a field worker, who gives particular attention to securing suitable employment for discharged patients. This vocational feature is proving particularly valuable. Since its adoption the entire expense of the out-patient department work has been met from the maintenance fund of the hospital. Excluding the cost of this department from the maintenance expense would materially reduce the institution's per capita cost, and should not be overlooked in any comparison on this point with other institutions. . . .

We commend the practice of giving employment to worthy patients who are discharged from the hospital. Men so employed consider their employment as a part of their treatment, and are governed by special rules which are applicable to them alone. For the greater part these employees have discharged their work conscientiously, and have been of aid in carrying out the co-operative interest between employees and patients, which is of major importance in an institution of the character of this hospital. An average monthly number of 50 men on the pay rolls of the Foxborough and Norfolk State hospitals were formerly patients. These men have been employed for periods ranging from one to four years. . . .

Particularly satisfactory has been the continued co-operation of the probation officers of the State, who have shown their appreciation by sending to the hospital men under probation or under suspended sentence. This plan has worked advantageously, and we respectfully ask probation officers for increased co-operation, as we feel that a large percentage of the cases of drunkenness coming under their observation can be satisfactorily treated by this method.

The problem of utilizing undeveloped land at Norfolk has been satisfactorily solved by allowing the Fisheries and Game and Forestry commissions certain extensive sections, which are now being used for their special purposes under their direction and in co-operation with our officers. This land, thus set apart, is unsuitable for agricultural development, but at present is admirably adapted for these special purposes. Further co-operation in educational work has been developed by

permission, which was given by the Board of Trustees to the geological departments of Harvard University and the Massachusetts Institute of Technology, to make use of certain tracts of lands at the Norfolk State Hospital for geological study and research, in return for which privilege we are assured of the co-operation of these institutions in such manner as it may be possible for them to co-operate in our educational program.

The trustees take this opportunity to thank the Fisheries and Game and Forestry commissions, who have cheerfully and unhesitatingly co-operated with us in the development of the Norfolk State Hospital. Thanks are also due the two educational institutions for the assurance of interest and assistance which they have generously extended.

The Massachusetts Agricultural College has aided us materially in carrying out agricultural work at the Norfolk State Hospital. Our future developments will be largely under the extension service of the Amherst Agricultural College, which has taken an extensive interest in our enterprises.

We believe that the practice of the co-operation of the hospital with State commissions and educational institutions is of mutual advantage, as it allows not only for the development of certain tracts of land which would otherwise be unused, but furnishes educational occupation of distinct value, which reacts favorably on the treatment of the patients and contributes largely to the accomplishments of the hospital.

MASSACHUSETTS SCHOOL FOR FEEBLE-MINDED AT WALTHAM.

Opened in October, 1848. Present capacity, 1,483; at Waltham, 1,183; at Templeton, 300; increase for the year, 43.

Valuation of plant, per capita of capacity, \$720; real estate, \$608; personal, \$112.

Daily average number of patients, 1,480; increase for the year, 50.

Number Oct. 1, 1913, 1,499.

The general statistics for the year are: —

		Males.	Females.	Totals.
Number remaining Sept. 30, 1912,	.	861	580	1,441
Admitted within the year,	.	222	82	304
School cases,	.	67	22	89
Custodial cases,	.	73	30	103
By transfer,	.	1	2	3
From visit,	.	39	18	57
From escape,	.	4	—	4
Nominally for discharge,	.	38	10	48
Whole number of cases within the year,	.	1,083	662	1,745
Dismissed within the year,	.	180	66	246
Discharged,	.	84	29	113
Capable of self-support,	.	14	1	15
Improved,	.	54	18	72
Not improved,	.	16	10	26
Died,	.	17	7	24
Transferred,	.	—	3	3
On visit Sept. 30, 1913,	.	60	27	87
On escape Sept. 30, 1913,	.	19	—	19
Number remaining Sept. 30, 1913,	.	903	596	1,499
State patients,	.	865	570	1,435
Private patients,	.	24	15	39
New England beneficiaries,	.	14	11	25
Daily average number of patients,	.	890	590	1,480
Number at school, Sept. 30, 1913,	.	635	596	1,231
Number at Templeton, Sept. 30, 1913,	.	268	—	268
Applications during the year,	.	—	—	451

Finances.

Expenditures from maintenance funds, \$299,963; total receipts, \$18,443; being \$15,200 from private sources, \$531 from reimbursing patients, \$610 from cities and towns, and \$2,102 from other sources.

Weekly per capita cost of maintenance computed on net expenses, \$3.85.

Weekly per capita cost of whole service, \$1.59; ward service, \$0.75.

One person employed for every 5.29 patients; 1 nurse for every 8.40 patients.

Average monthly wage for all persons employed, \$36.49; for nurses, \$27.38; men, \$34.07; women, \$26.32.

Extract from Superintendent's Annual Report.

There is urgent need for increased provision for the care and training of the feeble-minded of all classes and ages who have no homes, or where the parents are unable to properly care for them: for adult males

with sexual or criminalistic tendencies; and for the whole class of defective females. Poor families burdened with the care of helpless idiotic children should be relieved of these burdens. The large waiting lists of applicants at Waverly and at Wrentham show the crying need of such provision.

In the future it is probable that a comprehensive plan will be worked out providing care and supervision of the entire feeble-minded population of the State. The foundation of this plan would be a permanent continued census of every feeble-minded person in the State. The present inmates of institutions, the applicants on the waiting lists, and the recent census by the State Board of Insanity would be the nucleus of this census. This could be gradually enlarged by the co-operation of physicians, teachers, social workers, court and prison officials, local authorities, etc. This enumeration and record of the feeble-minded would permit some form of extra-institutional supervision and control, with regular visitation and reports from trained social workers. At the proper time the parents should be informed of the condition of the feeble-minded child, of the necessity for life-long supervision and of the probable need of institution treatment. Sooner or later the parents will probably be willing to allow their child to be cared for in the institution. The parents who are not willing should be allowed the custody of their child, with the understanding that he shall be properly cared and provided for during his life, that he shall not be allowed to get into mischief, and that he shall be prevented from parenthood. Whenever the parents or friends are unwilling or incapable of performing these duties, the law should provide that the child shall be forcibly placed in an institution or otherwise legally supervised. The visitors would visit and report upon applicants for admission, advise and assist patients at home on parole or who have been discharged. An important feature of this plan would be the opportunity afforded for the education of the family, the local officials and the community generally as to the hereditary nature and peculiar dangers of feeble-mindedness.

A rational State-wide policy for controlling feeble-mindedness must include this policy of persistent education and a recognition of the necessity of teaching the community how to safely tolerate and control mentally defective persons and families who are not sent to institutions.

This plan could be worked out with an organization in each institution looking out for a certain area surrounding such institution, or by some form of State-wide supervision. . . .

The new hospital for male patients, the "infirmary," opened in September, was completed at a cost well within the sum appropriated. This building, with its spacious and airy sun parlor, with a sanitary terrazzo flooring kept warm by steam pipes embedded in the floor itself,

its delightful sleeping rooms, cool and quiet rooms for those actually ill, its two immense protected outdoor porches, all on one floor, with its magnificent view and surrounded by a beautiful natural forest, affords ideal facilities for giving the best of care to the 70 feeble and sick boys and men who have been gathered from all the other buildings. . . .

The development of the farm colony at Templeton continues to be one of the most interesting features of the institution. The fine telford road, made of stones, gathered from near-by fields, connecting the four farm groups, and over 3 miles in length, is practically completed. The boys have cleared for cultivation more wild land than in any previous year. Despite the dry weather all summer, good crops were harvested. The boys are rugged, robust and contented.

WRENTHAM STATE SCHOOL.

Opened in June, 1907. Present capacity, 580; increase for the year, 200.

Valuation of plant, per capita of capacity, \$1,092; real estate, \$968; personal, \$124.

The general statistics for the year are:—

		Males.	Females.	Totals.
Number remaining Sept. 30, 1912,	. . . . .	188	216	404
Admitted within the year,	. . . . .	29	37	66
By commitment,	. . . . .	15	21	36
By transfer,	. . . . .	—	3	3
Returned from visit,	. . . . .	5	7	12
Returned from escape,	. . . . .	1	—	1
Nominally from visit,	. . . . .	7	6	13
Nominally from escape,	. . . . .	1	—	1
Whole number of cases within the year,	. . . . .	217	253	470
Dismissed within the year,	. . . . .	27	20	47
Viz.: Discharged,	. . . . .	15	6	21
Transferred,	. . . . .	—	1	1
Died,	. . . . .	1	3	4
On visit Sept. 30, 1913,	. . . . .	7	10	17
On escape Sept. 30, 1913,	. . . . .	4	—	4
Remaining Sept. 30, 1913,	. . . . .	190	233	423
Daily average number,	. . . . .	190.31	228.99	419.30

Finances.

Expenditures from maintenance funds, \$90,906; total receipts, \$1,114; being \$826 from reimbursing patients and \$288 from other sources.

Weekly per capita cost of maintenance computed on net expenses, \$4.11.

Weekly per capita cost of whole service, \$1.75; ward service, \$0.61.

One person employed for every 6.30 patients; 1 nurse for every 12.37 patients.

Average monthly wage for all persons employed, \$47.91; for nurses, \$33.02; men, \$39.42; women, \$32.48.

Extract from Superintendent's Annual Report.

All school classes, industries and occupations are arranged with a view of giving our children the maximum amount of outdoor life. With the good food that is provided, regular hours prescribed, and the social life that is arranged for our children, it seems that every requisite is furnished for good health.

The children's teeth are receiving attention by our dentist, who spends one day a week at the school. The very first attention that many children coming to the school need is the care of their teeth. The children's eyes are also being well cared for. Their eyes are examined and glasses provided when necessary. . . .

We have taught our children to play more than 200 different games. To foster the play instinct, and in order that it may permeate the whole institution, two hours a week are given by the gymnastic teacher to teaching the employees the different games suitable for the children.

In the industrial classes the children are taught weaving, making lace, basketry, crocheting, netting, brass work, leather work, knitting, sewing, dressmaking, rug making, brush making, shoe repairing and painting. Each child is taught as many or few of these occupations as he is capable of learning. When the various occupations connected with our farm, laundry and domestic departments are considered in connection with our school and industrial classes, it is clearly seen that there is something that every boy and girl can do.

Evening classes are held for our adult boys and girls in gymnastic work, fancy work, brass work, leather work and basketry. The teachers spend one evening each week socially at the different cottages. This is one of our methods for disseminating the school spirit throughout the institution.

The farm department remains our greatest asset in caring for the

older boys. The boys consider it the greatest promotion that can be conferred on them to be transferred to the farm department. It would be impossible to care for the adult boys without the resources and activities that the farm provides. During the vacation period in the summer the smaller boys are delighted with the opportunity of working in the vegetable gardens. Besides being the one most valuable educational department for our boys, the farm is the most practical department, as it provides fresh milk and vegetables, which are so important in the institution dietary.

HOSPITAL COTTAGES FOR CHILDREN.

This is a private institution, for which the Governor appoints five trustees, in addition to those selected by the corporation. It is maintained from the income of private funds, donations and the board of patients. State and town charges are received for \$3.25 a week, although the weekly cost of support is considerably in excess of this amount. In consideration of this service the State has from time to time appropriated money for buildings and structural improvements. It is subject to supervision by the State Board of Insanity, to which it makes a financial statement, and furnishes such other information as may be required.

Opened in June, 1882. Present capacity, 140. Daily average number, 105.

Valuation of plant, per capita of capacity, \$683. Permanent funds, \$326,659. Expenditures for maintenance, \$35,820. Receipts, \$41,108; support of State charges, \$13,322; from cities and towns, \$454; from individuals for support of patients, \$6,598; from sales, contributions and other sources, \$20,731. Weekly per capita cost of maintenance, \$6.15.

The general statistics for the year 1913 are:—

Patients in the hospital Oct. 1, 1912,	104
Admitted within the year,	29
From the community,	27
From visit, nominally,	2
Whole number of cases within the year,	133
Dismissed within the year,	27
Viz.: Discharged,	17
Died,	9
On visit Sept. 30, 1913,	1
On escape Sept. 30, 1913,	-

Remaining Sept. 30, 1913,	106
Viz.: State patients,	80
Town patients,	2
Private patients,	24
Daily average number of patients,	105
The largest number on any day,	108
The smallest number on any day,	101

Nineteen epileptics were admitted. Eleven epileptics were dismissed; 6 improved; 2 much improved; 1 not improved; 2 died.

Extract from Trustees' Annual Report.

The superintendent's report shows about the same number of children cared for as last year, still somewhat smaller than usual on account of the continued vacancy of the east wing throughout most of the year. The renovation of that building is now completed, and with freshened walls, ceilings and woodwork, new floors and plumbing, new furnishings throughout, and new terrazzo floors in the bath rooms, constitutes a great improvement in the hospital plant. Two floors of the buildings are already in use and the third is ready for occupancy. . . .

The schools for our children have maintained their traditional excellence, notwithstanding some unavoidable interruptions, and the course of instruction for our nurses has been still further amplified.

THE PRIVATE INSTITUTIONS.

THE McLEAN HOSPITAL.

Opened in October, 1818. Present capacity, 221; increase for the year, 1.

Valuation of plant, per capita of capacity, \$8,712.

Average weekly per capita cost of maintenance, \$27.37.

Daily average number of patients, 221; increase for the year, 3.

Number Oct. 1, 1913, 218.

All commitments, 144; decrease for the year, 15.

Commitments as insane, 141: decrease for the year, 2.

First cases of insanity, 84; 59.57 per cent.

Voluntary admissions, 74; increase for the year, 3.

Emergency commitments, 1.

Temporary-care admissions, 15.

First Cases of Insanity.

Native-born patients, 80.95 per cent.; mothers, 65.85 per cent.; fathers, 62.20 per cent.

Age sixty years or over, 16.67 per cent.

Resident in cities or large towns, 78.57 per cent.; country districts, 21.43 per cent.

Previous duration of insanity under six months, 46.43 per cent.

Curable forms of insanity, 44.05 per cent.

Causes: hereditary, 42.86 per cent.; alcoholic, 1.19 per cent.; coarse brain lesions, 3.57 per cent.; syphilis, 3.57 per cent.

Recoveries of the Insane.

Whole number, 45; 31.91 per cent. of commitments.

Recoveries of first cases of insanity, 24; 28.57 per cent. of first cases.

Recoveries in curable group A, 22; 59.46 per cent. of such curable cases.

Deaths of the Insane.

Whole number, 17; 4.67 per cent. of the whole number of persons treated.

Curable forms of mental disease present in 23.53 per cent.; general paralysis in 29.41 per cent.; coarse brain lesions in 23.53 per cent.

Extract from Superintendent's Annual Report.

It is now recognized by every one as a legitimate function of the hospital, second only to the immediate care of its patients, to contribute something to the general knowledge of mental diseases and to aid in the education in this field of a competent body of physicians for the service of the public. Work in the laboratories has therefore been carried on, and a clinic for medical students has been held each week during eight months of the year. It is hoped that the friends of the hospital know of the considerable expense at which laboratories are maintained, and that a fund is needed for the purpose. . . .

The medical library, the maintenance of which is so necessary for the laboratories and the medical work of the hospital in general, has been increased by 191 volumes. There have been added to the general

library during the year 272 volumes. Not only can patients come to the library rooms to select their books, but the head nurses of all the houses, except three where the patients are destructive, keep a supply of books on the sitting-room tables, so that those who have not initiative enough to select books for themselves may have them always at hand. There can be no doubt of its value from a therapeutic point of view. The combined medical and general library now comprises 13,127 volumes, and, to say the least, is one of the most important hospital libraries in the world.

During the year, in addition to her routine work, the librarian, at the request of the State Board of Insanity, visited all of the libraries of the State hospitals under the supervision of the Board and submitted a formal report with suggestions. She also has given lectures on the history of the English novel to the senior class of nurses in the training school, further mention of which will be made in the report of the school.

It has been found that one of the best occupations for patients from a therapeutic point of view is weaving, which combines interested attention with other mental activity and exercise of the body. The former room for weaving was crowded with seven looms. An extension has been built at the expense of \$7,000, which gives a room 21 by 47 feet. It is lighted by six large windows on one side, four smaller windows on the other, and a large skylight, so that there will be abundant light for the 15 or 18 looms which it will easily accommodate. In one end is a large closet with drawers and shelves for raw material, and a large cabinet for occasional pieces of work made and contributed by patients as samples for future workers. A staircase leads to the floor below, where a room 21 by 35 feet, dry and well lighted, is available for modeling in clay. These rooms will be ready for use in January. Every year some additions are made to the forms of employment available for patients, and it is now possible to offer something that would appeal to nearly every one. There is an increasing tendency to try to produce really good things, and not to be satisfied so long as a patient is doing something, regardless of the quality of the product. Primarily the purpose of occupation from the physician's point of view is to divert the patient's attention from distressing mental complexes to more normal trains of thought, but attention and interest are more easily obtained and held if the result is something desirable and satisfying. . . .

Something is now done for the men patients in the way of occupation, but the work should be extended. The present workroom in the men's gymnasium building is too small for the purpose. There should be another in which different forms of handicraft can be carried on under the direction of an experienced instructor, who is absolutely essential to the success of the work. In other words, the hospital should

do for the men patients what is now so successfully being done for the women. The plan of the house is such that an addition can easily be made similar to that now approaching completion for the women, and it is recommended that it be made the coming spring. . . .

The cottage for one patient, described in the last annual report, was finished and furnished early this year, and has been occupied since July. It has proved to be entirely satisfactory, and it is recommended that another be built the coming year, located perhaps on the hill by the Upham house.

OTHER PRIVATE INSTITUTIONS

licensed by the Governor and Council under the provisions of section 24, chapter 504, Acts of the Legislature of 1909, number 26. An additional license was granted during the year to Mary W. L. Johnson, M.D., in Brookline, for the care and treatment of the insane, feeble-minded, epileptic and persons addicted to the intemperate use of narcotics or stimulants.

On Sept. 30, 1913, there were in these institutions 206 patients, an increase of 2 for the year. The insane numbered 131, or 63.59 per cent. There were 193 admissions of the insane and 190 dismissals during the year.

The numbers on Sept. 30, 1913, for each institution are set forth in the following tabulation:—

NUMBER OF PATIENTS SEPT. 30, 1913.

Of the 26 persons holding licenses for the maintenance of private hospitals, 3 are not taking any patients, and 1 is established for a single patient only. Forty-nine visits were made to authorized private institutions by a physician representing the Board.

The difficulties of setting and maintaining standards of care and accommodations in these smaller private institutions have previously been discussed. For the treatment of acute cases but few are well equipped, and few attempt to care for such cases as are excited, noisy, untidy and in general disturbing to others. The means of effective isolation are usually inadequate, and do not permit the presence of such individuals with others who are less disturbed and sensitive to their environment.

While much is to be desired as far as standardization of equipment and methods is concerned, there is less to be said as to the care of quiet, chronic demented persons, whose expressed wants are few and whose physical comfort is easily ministered to. The therapeutic indications are more often indicative of mental and moral procedures than for other recognized forms of treatment. The use of such means may be more effective in the small institution, because the physician and attendant both may have abundant time to devote to the individual patient. Whether or not the private hospital patient benefits from this condition of environment depends largely on the character of those in charge and their enthusiasm and energy. The observation which has been made that the sick-poor and the wealthy have access to the best forms of treatment, under skillful medical men, holds true for those afflicted with mental disease. Our public hospitals offer facilities for care and treatment which private institutions cannot furnish, except at large cost. The self-respecting individual of moderate means who seeks adequate care during his mental illness must go to the State hospital, in spite of his desire or that of his family for good care in surroundings less foreign to those to which he has been accustomed. The need of smaller private institutions for those in moderate circumstances is evident, but such cannot be properly maintained for all kinds of mental illness without a financial foundation established by endowment or other permanent resources.

The study of physical conditions in those mentally ill is sometimes easily overlooked. Attempts to standardize physical examinations are as impossible here as in general hospitals or private practice. Even a rule to insure a physical examination at stated periods would be of comparatively little value, inasmuch as accuracy of observation cannot be enforced by law. The effort to secure the adoption of a uniform system of filing records has been partially successful, and has stimulated attention to the necessity and value of better records. This of itself is likely to result in closer observation and more frequent examinations. It is believed that the suggestion and criticism of a supervisory Board is the most effectual way of securing these better methods, rather than by drastic rules which cannot be uniformly enforced. The reduction to a minimum of restraint and seclusion was accomplished by similar means before there was legislation on this subject.

UNLICENSED HOMES.

Some 13 homes, advertising to care for nervous and chronic invalids, were investigated by an agent of the Board. Four of these were conducted by physicians, four by trained nurses, two by experienced nurses and three by individuals without experience as a means of increasing income. In 7 of these 13 places there were no patients at the time of the agent's visit. In but 1 were there found patients who were improperly classed according to the policies of the Board. The requirements of the law were carefully explained in each instance, and a copy left with the manager or owner.

Twenty visits were made to homes or establishments previously visited, where the character of the patients was such that some supervision from this office seemed desirable.

There are now four insane patients cared for either in their own homes or in private homes for the care of invalids with the consent of this office. These patients are regularly visited, and either they have been long cared for in their present locations, where they were found, or the present location was sanctioned, under supervision, at the earnest request of the near

relatives of the patient as the conditions seemed unusual and the requests reasonable.

The comments on these places in the last report still remain true.

FAMILY CARE OF THE INSANE.

UNDER STATE BOARD.

First patient boarded in a family, Aug. 10, 1885. Since placed, 1,242 different patients.

Number in families, Oct. 1, 1913, 336, — 12 men, 324 women.

Placed during the year, 103 persons; an increase of 23.

Daily average number for the year, 309; an increase of 16.

Passed out of public support: —

During the year, 17; an increase of 5; viz.: discharged self-supporting, 1; discharged to friends, 1; self-supporting in families, 11; boarded with friends without public expense, 4.

Since 1885, 256 different patients, viz.: discharged self-supporting, 93; discharged to care of friends, 39; self-supporting in families, 75; boarded with friends without public expense, 29; became private patients, 20.

Reappeared under public support: —

During the year, 8; since 1885, 76; 30 per cent.

Number of families having patients, 160, an increase of 13; 89 families having 1 patient; 21 families, 2; 11 families, 3; 24 families, 4; 14 families, 5; 1 family, 6.

Number of cities and towns in which patients are boarded, 54, a decrease of 1. Largest number of patients in any one town, 76; of families, 28.

The general statistics for the year are: —

	1913.			INCREASE FOR THE YEAR.		
	Males.	Females.	Totals.	Males.	Females.	Totals.
Remaining Sept. 30, 1912,	13	303	316	1 ¹	19	18
Admitted within the year,	4	105	109	1 ¹	29	28
By transfer from institutions,	3	101	104	2 ¹	25	23
Returned from escape,	-	2	2	-	2	2
Nominally admitted from visit, for discharge, .	-	2	2	-	2	2
Nominally admitted from escape, for discharge, .	1	-	1	1	-	1
Whole number of cases within the year,	17	408	425	2 ¹	48	46
Dismissed within the year,	5	84	89	1 ¹	27	26
Viz.: Discharged,	2	9	11	-	5	5
Capable of self-support,	1	8	9	1 ¹	5	4
Requiring further care,	1	1	2	1	-	1
Transferred to institutions,	2	71	73	2 ¹	24	22
Unsuitable,	-	19	19	3 ¹	7	4
Temporarily,	2	32	34	2	9	11
Ill,	-	20	20	1 ¹	8	7
Died,	-	1	1	-	1 ¹	1 ¹
Escaped,	-	1	1	-	1 ¹	1 ¹
On visit, Sept. 30, 1913,	1	2	3	1	-	1
Remaining Sept. 30, 1913,	12	324	336	1 ¹	21	20
Viz.: Supported by State,	8	269	277	1	10	11
Reimbursing,	-	18	18	-	1	1
Private,	1	10	11	-	1 ¹	1 ¹
Self-supporting,	2	20	22	2 ¹	8	6
Living with friends without public aid, .	1	7	8	-	3	3
Number of different persons within the year, .	17	391	408	2 ¹	45	43
Number of different persons admitted,	3	102	105	2 ¹	27	25
Number of different persons dismissed,	5	83	88	1 ¹	27	26
Daily average number,	11.84	297.54	309.38	.43	15.72	16.15
State,	6.51	247.55	254.06	.58	6.81	7.39
Reimbursing,	-	15.67	15.67	-	.52	.52
Private,	1.00	11.42	12.42	.34 ¹	1.37	1.03
Self-supporting,	3.60	17.99	21.59	.12	6.38	6.50
Living with friends without public aid, .	.73	4.91	5.64	.07	.64	.71

¹ Decrease.

The total and weekly per capita expenditures of the State on account of patients in private families for the year ending Nov. 30, 1913, and since Oct. 1, 1889, are shown as follows:—

	Fiscal Year ending Nov. 30, 1913.	Since Oct. 1, 1889.
Payments for board,	\$42,261 13	\$605,775 55
Average number of patients, exclusive of private patients, . . .	299.36	198.62
Weekly per capita cost of board,	\$2 71	\$2 41
Payments for extra clothing, not included in board rate,	\$239 98	\$2,277 41
Payments for medical attendance, etc., not included in board rate, .	\$267 65	\$4,334 33
Weekly per capita cost of such expenses, outside of board rate,	\$0 03	\$0 03
Weekly per capita cost of support (being cost of board, clothing, medical attendance, etc.).	\$2 74	\$2 44
Payments for supervision (being transportation, salaries and expenses of visitors).	\$6,099 50	\$78,375 53
Average number of patients,	312.08	205.58
Weekly per capita cost of supervision,	\$0 37	\$0 29
Weekly per capita cost of support and supervision,	\$3 11	\$2 73

First Admissions.

Of the 82 first admissions, 11 had been in institutions continuously for less than a year; 12, one to two years; 11, two to three years; 11, three to four years; 8, four to five years; 3, five to six years; 2, six to seven years; 3, seven to eight years; 4, eight to nine years; 4, nine to ten years; 2, ten to eleven years; 4, eleven to fourteen years; 4, fifteen to twenty years; 1, twenty to twenty-one years; 2, thirty-five to thirty-seven years. The average hospital residence was five years, eleven months.

Of the 23 persons so residing less than two years, 4 had been previously insane inmates of institutions.

Of the 82 persons first admitted, 14 were returned to institutions. The remainder were successfully boarded; 30 improved mentally and physically, 34 improved physically and 4 made no improvement.

Readmissions.

Of the 22 such cases, 15 were readmitted for the first time, 4 for the second, 1 for the third, 1 for the sixth and 1 for the seventh. Seventeen had remained in institutions after return from boarding less than a year; 2, two to three years; 1, six to seven years; 2, nine to eleven years; the average duration being one year, nine months.

Nineteen had been returned to institutions temporarily after boarding an average of two years, one month; 1 as unsuitable after boarding three months; 1 as ill after boarding seven months; 1 was discharged after boarding four months.

Discharges.

Eleven cases were discharged; 6 after boarding less than a year; 2, one to two years; 2, six to seven years; 1, eight years.

Two had been continuously inmates of institutions prior to boarding out three to four years; 3, two to three years; 2, one to two years; 4, less than a year.

Five were discharged self-supporting, 5 to friends and 1 requiring further care.

In addition, 3 patients were on visit Oct. 1, 1913.

Transfers to Institutions.

Seventy-three cases were transferred to institutions; 19 as unsuitable, 20 physically ill, 34 temporarily.

Of the 19 so transferred as unsuitable, 12 had boarded less than a year; 1, one to two years; 1, three to four years; 2, six to seven years; 3, seven to ten years; the average duration being two years, six months. Eight had been tried in one family, 7 in two families, 3 in three families and 1 in four families.

Of the 20 so transferred as ill, 7 had boarded less than a year; 1, one to two years; 3, two to three years; 1, three to four years; 1, five to six years; 4, six to seven years; 2, ten to eleven years; 1, twenty-seven years; the average duration being four years, eight months. One was readmitted to family care, 1 was discharged, 7 remained in institutions, 6 died

within one month, 1 within two months, 2 within three months and 2 within six months.

Of the 34 so transferred temporarily, 20 had boarded less than a year; 5, one to two years; 5, two to three years; 1, four to five years; 2, seven to ten years; 1, thirteen years; the average duration being one year, ten months. Fourteen were readmitted to family care within the year.

Transfers between Families.

There were 122 transfers between families. The reasons for such transfers are shown as follows:—

Self-support,	11
To friends,	14
To make room for another patient,	1
Unable to continue self-supporting,	2
Patient troublesome,	37
Patient dissatisfied,	29
Patients no longer desired,	24
Caretaker unsuitable,	4

Deaths.

One patient died, after boarding one year, nine months.

In addition, 12 patients died in institutions within six months after returning.

Escapes.

Three patients left their boarding places without leave. Two were apprehended and returned to institutions. One patient is supporting herself outside the State.

Families.

The 336 patients remaining Sept. 30, 1913, were in 160 families, an increase of 13. Eighty-four families had 1 patient each; 21 families, 2; 11 families, 3; 24 families, 4; 14 families, 5; 1 family, 6; 5 patients found their own boarding places.

Seventeen of these patients were with relatives, 9 with interested friends.

Seventy-one new families applied for patients, 6 being re-

jected. Fifty-eight new families were given patients within the year.

Two families became unsuitable and patients were withdrawn.

Cities and Towns.

The patients remaining Oct. 1, 1913, resided in 54 cities and towns:—

Amesbury, 1; Andover, 2; Arlington, 1; Ashland, 4; Athol, 1; Bellingham, 1; Beverly, 1; Billerica, 2; Boston, 6; Brookfield, 5; Brookline, 1; Cummington, 1; Dover, 3; Easton, 2; Framingham, 5; Goshen, 1; Hawley, 1; Holliston, 15; Hopkinton, 10; Hudson, 3; Leicester, 6; Lowell, 6; Marlborough, 2; Medford, 1; Milford, 2; Needham, 3; New Bedford, 3; New Braintree, 1; Newburyport, 1; Newton, 1; North Brookfield, 23; Norton, 1; Petersham, 2; Prescott, 1; Reading, 5; Revere, 2; Rochester, 1; Royalston, 4; Salem, 1; Somerville, 2; Southborough, 7; Taunton, 17; Tewksbury, 76; Tyngsborough, 1; Walpole, 5; Wayland, 1; Westborough, 53; Weymouth, 1; Whitman, 1; Williamsburg, 6; Wilmington, 22; Winchester, 2; Woburn, 8; Worcester, 2.

UNDER TRUSTEES.

The trustees of institutions were authorized, by chapter 458 of the Acts of 1905, to place their patients in the care of private families under substantially the same conditions as the State Board.

First patient boarded in a family, June 13, 1905. Since placed 70 different patients.

Number in families, October, 1913, 30,—2 men and 28 women.

Placed during the year, 18 persons, a decrease of 3.

Number of families having patients, 19, an increase of 1; 14 families having 1 patient each; 1 family, 2; 2 families, 3; 1 family, 4.

Number of towns in which patients are boarded, 14, an increase of 1. Largest number of patients in any one town, 8; of families, 3.

The general statistics for the year are:—

	1913.			INCREASE FOR THE YEAR.		
	Males.	Females.	Totals.	Males.	Females.	Totals.
Remaining Sept. 30, 1912,	2	24	26	1	14	15
Admitted within the year,	3	15	18	1	4 ¹	3 ¹
Whole number of cases within the year,	5	39	44	2	10	12
Dismissed within the year,	3	11	14	2	6	8
Viz.: Returned to institutions,	2	7	9	1	2	3
Unsuitable,	-	1	1	-	1 ¹	1 ¹
Temporarily,	1	5	6	1	4	5
Ill,	1	1	2	-	1 ¹	1 ¹
Died,	-	2	2	-	2	2
Discharged,	1	1	2	1	1	2
Escaped,	-	1	1	-	1	1
Remaining Sept. 30, 1913,	2	28	30	-	4	4
Supported by State,	-	20	20	-	6	6
Private,	-	5	5	-	2 ¹	2 ¹
Self-supporting,	2	3	5	-	-	-
Number of different persons within the year,	4	36	40	1	8	9
Number of different persons admitted,	3	15	18	1	4 ¹	3 ¹
Number of different persons dismissed,	3	11	14	2	6	8
Daily average number,	1.99	24.92	26.91	1.09	9.70	10.79
State, . . . . .	.29	15.83	16.12	.29	6.52	6.81
Private,	-	6.24	6.24	-	3.34	3.34
Self-supporting,	1.70	2.55	4.55	.80	.16 ¹	.64

¹ Decrease.

THE ALLEGED INSANE, FEEBLE-MINDED AND EPILEPTIC IN ALMSHOUSES AND IN THE COMMUNITY.

The tentative arrangement has been continued with the State Board of Charity relative to the visitation of alleged insane, feeble-minded or epileptic persons who may be cared for in almshouses or private families under public support.

Three such cases of patients in almshouses were reported by the Board of Charity. A visit of investigation was made to the almshouses in each case by a medical officer of the Board of Insanity. No action was necessary.

One patient in a private family was reported by the Governor. No action was necessary.

THE STATE BOARD.

PROCEEDINGS.

Thirty-two Board meetings were held during the year.

Eleven conferences with the trustees and superintendents of the different institutions were arranged to promote harmonious action with relation to appropriations, construction and general policy.

There were 3 conferences with the Board of Health relative to Resolve 85, which provides for an investigation of impediments to marriage by the State Board of Health and the State Board of Insanity.

Thirty-two visits of inspection were made by the Board, in addition to 367 by the executive officer, the deputy executive officer, the pathologist, assistant to executive officer, the financial agent and the director of industries.

Careful attention has been paid to all complaints as to commitment, discharge, death or treatment of patients, whether originating with the latter or otherwise. One hundred and thirty-three special investigations were made in regard to these and kindred matters relating to patients in institutions.

A license was granted during the year to Mary W. L. Johnson, M.D., in Brookline, for the care and treatment of the insane, feeble-minded, epileptic and persons addicted to the intemperate use of narcotics or stimulants.

THE PERSONNEL OF THE BOARD

has changed within the year. Mr. Henry P. Field retired in December, 1912; Dr. Herbert B. Howard, chairman, in March, 1913; and Dr. Edward W. Taylor in November, 1913; their terms having expired. The following resolutions were adopted and ordered spread upon the records:—

“The State Board of Insanity hereby records its appreciation of the work of Henry P. Field, member of the Board from Oct. 15, 1906, to Dec. 13, 1912, coming to the Board after four years as trustee of the Northampton State Hospital. An attorney by profession, he has been

of special assistance to the Board in properly deciding the many matters coming before it requiring legal advice.

“Mr. Field leaves the Board with the respect and best wishes of all.”

“*Resolved*, That in the retirement of Dr. Herbert B. Howard as a member of the State Board of Insanity, the Board loses a tried and competent member and the State a public servant of integrity and unusual experience.

“Dr. Howard had a career which eminently fitted him for the work and responsibilities of this Board through long and varied association with State and private institutions. He became assistant physician of the State Infirmary in 1884, and its superintendent in 1891. In 1897 he resigned this position to become superintendent of the Massachusetts General Hospital. In 1908 he resigned from the Massachusetts General Hospital to assume the superintendency of the Peter Bent Brigham Hospital, a position which he now holds. His connection with the State Board of Insanity dated from its establishment in 1898. In 1902 he resigned to become trustee and chairman of the Gardner State Colony, and on his resignation, in 1907, he was reappointed a member of the State Board of Insanity, of which he became chairman in 1908, a position which he filled with dignity and efficiency until March, 1913.

“His colleagues on the State Board of Insanity hereby place on record their deep appreciation of his work as a member of the Board and their recognition of his sterling qualities as a man.”

“The State Board of Insanity hereby records its appreciation of the work of Dr. Edward W. Taylor as member of the State Board of Insanity from December, 1910, to November, 1913.”

Dr. Mary L. Neff, Director of Industries, resigned in February, 1913, and Miss Emily L. Haines was appointed to fill this position in October, 1913.

As directed by the Legislature of 1913, the Board makes the following special report relative to social service:—

To the Honorable Senate and House of Representatives.

As directed by chapter 120, Resolves of 1913,—“To provide for an Investigation of Social Service Work for the Prevention of Insanity and the Subsequent Care of the Mentally Ill”,—the State Board of Insanity herewith presents its report.

The great problems of social service work among the insane are obviously prevention, after-care and non-hospital care. Much is done by the regular organization of each hospital—by its medical service in treating patients as they are received and during their stay under the hospital’s care. When each patient is received an effort is made to determine the physical and mental condition, but the element of in-

dividuality, which is of great importance, is usually difficult to determine. The individual is largely influenced by heredity and environment, and these factors cannot easily be determined by an examination made on admission of the patient to the hospital. If this element is not considered, then the examining physician is leaving out of consideration one of the most important points in his study of the case.

Unless the cause which led up to the patient's abnormal mental condition is determined, the treatment cannot be satisfactorily carried out, either while the patient is in the hospital or after his discharge. The physician treating him must know the individual and have an accurate knowledge of his previous environment to treat him intelligently, and, when improvement or recovery is obtained, to send him from the hospital into an environment which will be favorable to continued mental and physical health.

It is manifestly impossible for the usual hospital physician, with the number of cases which he has under his supervision, to do more than treat the patient while under his care. This treatment is of great importance to the patient, but more than this is necessary. The physician cannot in very many cases go out into the community to determine the exciting causes and the home environment, and he must turn to some one who, equipped by training and experience, can obtain this information for him, some one who can devote practically his entire time to this. Then, too, it not infrequently happens that home conditions are not well known, and a patient may so far recover as to be no longer a danger to himself nor a menace to the community, if allowed to leave the hospital under proper supervision. Here again, the physician is not, by the very pressure of his hospital work, physically able to study the home environment to which the patients will go. If done, and it is of the greatest importance that it should be, it must be accomplished by some one other than the hospital physician. Thus, both when the patient is admitted to the hospital and when able to be discharged therefrom, we must turn to *social service workers* who are trained in this work, and who can obtain the facts that the physician needs in intelligently dealing with the individual patient.

In obtaining the information suggested above, these workers from each institution will come into close contact with the community and there will result an enlightenment as to what can be done tending to prevent mental disease and defect, and the desirability of giving early and proper treatment to those mentally afflicted. Needy families, the man or woman of which has been sent to a State hospital, will, by this social worker, be connected with the proper local agencies. Recommitments may be avoided by assisting in tiding a patient over a critical period. Patients who have left the hospital will be heard from more often and the results of hospital treatment more accurately determined. Patients, when they know that a real interest is taken in them, will re-

turn to the hospital more often if in need of advice, and, realizing the recurrence of their mental illness, will return for treatment. The social service department of each institution serves as another connecting link with the community, and is sure to awaken additional interest in our hospitals, resulting in a better understanding by the community of the hospitals' work and needs, and also a better understanding of the community's needs by the hospital staffs.

The study of *eugenics*, although associated with social service, requires workers of special training, and while in certain institutions social work and eugenics work may be combined, this Board is of the opinion that they are better done by separate workers. Family care, i.e., where patients who have no interested relatives are sent into suitable families to board, is very similar to after-care work and may be combined with it, at least until such time as both branches of the work become of sufficient importance to require separate directors.

Considerable social service work has been done in the past in each of the institutions under the supervision of this Board, but it is only during the past few years that the possibilities of a well-organized social service department at each hospital, devoting its entire time to this work, have been realized. Each hospital now desires such a department. Several of the hospitals have already done enough to prove the value of social service work, but have not as yet a sufficient number of workers to do the work as they desire.

The State Board of Insanity believes that this work is of great importance and that it should be encouraged in every way possible. The particular way in which it can be encouraged by the Legislature is in granting a sufficient annual appropriation for each institution, so that social service workers may be employed. The State Board of Insanity expects to appoint a supervisor of social service work, who will co-ordinate the work of all institutions under its supervision.

Respectfully submitted,

MICHAEL J. O'MEARA, M.D., *Chairman*,

WILLIAM F. WHITTEMORE,

JOHN WHITING MASON,

L. VERNON BRIGGS, M.D.,

JAMES M. W. HALL,

State Board of Insanity.

The State Board of Health and the State Board of Insanity present their special report, as directed by the Legislature of 1913, relative to impediments to marriage:—

To the Honorable Senate and House of Representatives.

In pursuance of an order of the Legislature approved May 8, 1913, contained in chapter 85, Resolves of 1913, the State Board of Health

and the State Board of Insanity have the honor to present herewith their joint report on their "Investigations of Impediments to Marriage", with their recommendations for legislation and accompanied by the draft for your consideration.

Several meetings have been held, one advertised hearing at which those particularly interested were heard, and numerous conferences with individuals. There was also sent out a circular letter to physicians, clergymen, teachers, social workers, officials of charitable institutions and to individuals who might be interested in this matter to the number of 7,480. There were received 2,481 replies; 1,202 of these being from physicians, 938 from ministers, 157 from principals of schools and 44 from social workers. These 2,481 replies contained 4,003 recommendations: 2,120, or 53 per cent., being received from physicians; 1,341, or 34 per cent., from ministers; 268, or 6 per cent., from principals of schools, and 105, or 3 per cent., from social workers. The recommendations of what the impediments should be were varied and numerous, the first ten in point of numbers being:—

1. Those having a communicable or transmissible disease, 914, or 23 per cent.
2. Those advocating health certificate, 495, or 12 per cent.
3. Those having tuberculosis, 329, or 8 per cent.
4. Those advocating a physical examination, 249, or 6 per cent.
5. Habitual use of alcoholic beverages, 237, or 6 per cent.
6. The feeble-minded, 211, or 5 per cent.
7. Those of criminal tendencies, 145, or 3 per cent.
8. Those who have been divorced, 108, or 3 per cent.
9. Those who suffer from epilepsy, 102, or 3 per cent.
10. Longer notice of intended marriage, 81, or 2 per cent.

These recommendations have received the study of the committee appointed for that purpose, and being further considered at a joint meeting of the Board of Health and the Board of Insanity, Jan. 9, 1914, it voted to recommend the following legislation as conservative and wise in its provisions, reasonably practicable in its enforcement and in accordance with the opinion of large numbers of people who have given this matter their serious attention.

1. To amend section 5, chapter 151, of the Revised Laws, so as to read as follows:—

SECTION 5. An insane person, an idiot, an imbecile, or a feeble-minded person, or a person suffering from syphilis or gonorrhoea in their communicable stages, shall not be capable of contracting marriage. The validity of a marriage shall not be questioned by reason of the insanity, idiocy, imbecility or feeble-mindedness, or the syphilis or gonorrhoea of either party in the trial of a collateral issue and shall be raised only in a process instituted in the lifetime of both parties to test such validity.

2. To amend section 13, chapter 151, of the Revised Laws, so as to read as follows:—

SECTION 13. The issue of a marriage which is declared void by reason of the nonage, insanity, idiocy, imbecility or feeble-mindedness, or the syphilis or gonorrhœa of either party shall be the legitimate issue of the parent who was capable of contracting the marriage.

3. To amend section 1, chapter 752, Acts of 1913, so as to read as follows:—

SECTION 1. The secretary of the commonwealth shall furnish to the clerk or registrar of every city or town, a printed list of all legal impediments to marriage, and it shall be the duty of the city or town clerk or registrar forthwith to post, and thereafter to maintain the same in a conspicuous place in his office and to give to such applicants for a marriage license a suitable printed list of such impediments.

Respectfully submitted,

HENRY P. WALCOTT, M.D., *Chairman*,

MILTON J. ROSENEAU, M.D.,

HIRAM F. MILLS,

ROBERT W. LOVETT, M.D.,

C. EUGENE McGILLCUDDY,

CLEMENT F. COOGAN,

JOSEPH A. PLOUFF,

State Board of Health.

MICHAEL J. O'MEARA, M.D., *Chairman*,

WILLIAM F. WHITTEMORE,

JOHN WHITING MASON,

L. VERNON BRIGGS, M.D.,

JAMES M. W. HALL,

State Board of Insanity.

AN ACT RELATIVE TO THE CONTRACTING OF MARRIAGES.

Be it enacted, etc., as follows:

SECTION 1. Section five of chapter one hundred and fifty-one of the Revised Laws is hereby amended so as to read as follows:— *Section 5.* An insane person, an idiot, an imbecile, or a feeble-minded person, or a person suffering from syphilis or gonorrhœa in their communicable stages, shall not be capable of contracting marriage. The validity of a marriage shall not be questioned by reason of the insanity, idiocy, imbecility, or feeble-mindedness, or the syphilis or gonorrhœa of either party in the trial of a collateral issue and shall be raised only in a process instituted in the lifetime of both parties to test such validity.

SECTION 2. Section thirteen of chapter one hundred and fifty-one of the Revised Laws is hereby amended so as to read as follows:— *Section 13.* The issue of a marriage which is declared void by reason of the nonage, insanity, idiocy, imbecility or feeble-mindedness, or the

syphilis or gonorrhoea of either party shall be the legitimate issue of the parent who was capable of contracting the marriage.

SECTION 3. Section one of chapter seven hundred and fifty-two of the acts of the year nineteen hundred and thirteen is hereby amended so as to read as follows:— *Section 1.* The secretary of the commonwealth shall furnish to the clerk or registrar of every city or town a printed list of all legal impediments to marriage, and it shall be the duty of the city or town clerk or registrar forthwith to post and thereafter to maintain the same in a conspicuous place in his office and to give to such applicants for a marriage license a suitable printed list of such impediments.

PLANS AND SPECIFICATIONS

have been examined and approved by the Board as follows:—

Worcester Hospital.—One cottage for employees (chapter 133, Resolves of 1913) approved Dec. 27, 1912. Alterations, female nurses' home (chapter 133, Resolves of 1913), approved Dec. 27, 1912.

Westborough Hospital.—Additions and alterations on women's wards (chapter 133, Resolves of 1913) approved Dec. 27, 1912. Central power and heating plant (chapter 133, Resolves of 1913) approved Dec. 27, 1912.

Boston Hospital.—Reception building to accommodate male patients (chapter 133, Resolves of 1913) approved Dec. 27, 1912. Modifications approved Feb. 14, 1913. Two cottages in men's industrial group (chapter 133, Resolves of 1913) approved Dec. 27, 1912. Cottage for farm patients (chapter 133, Resolves of 1913) approved Dec. 27, 1912. Modifications approved Aug. 8, 1913. Extending boiler house, etc. (chapter 133, Resolves of 1913), approved Dec. 27, 1912. Modifications approved Aug. 29, 1913. Extension of sewer and water systems (chapter 133, Resolves of 1913) approved Dec. 27, 1912. Modifications approved Aug. 29, 1913.

Worcester Asylum.—Kitchen and dining room building for Colony No. 2 (chapter 133, Resolves of 1913) approved Dec. 27, 1912. Modifications approved July 11, 1913. Home for male nurses (chapter 133, Resolves of 1913) approved Dec. 27, 1912. Home for female nurses (chapter 133, Resolves of 1913) approved Dec. 27, 1912. Service building, central

kitchen and dormitory at Colony No. 4 (chapter 133, Resolves of 1913), approved Dec. 27, 1912.

Gardner Colony. — Cottage for 30 patients (chapter 133, Resolves of 1913) approved Dec. 27, 1912.

Monson Hospital. — Building for 130 insane male patients (chapter 133, Resolves of 1913) approved Dec. 27, 1912. Modifications approved Feb. 14, 1913.

Wrentham School. — Custodial building for 135 patients (chapter 133, Resolves of 1913) approved Dec. 27, 1912. Two dormitories for 210 patients (chapter 133, Resolves of 1913) approved Dec. 27, 1912. Three homes for employees (chapter 133, Resolves of 1913) approved Dec. 27, 1912. Modifications approved Feb. 14, 1913. Administration building (chapter 133, Resolves of 1913) approved Dec. 27, 1912. Additions to power house, etc. (chapter 133, Resolves of 1913), approved Dec. 27, 1912. Additions to service building (chapter 133, Resolves of 1913) approved Dec. 27, 1912.

ESTIMATES OF STATE EXPENSES FOR 1914

on account of the insane, feeble-minded, epileptic and inebriates in Foxborough State Hospital amount to \$5,308,858.89, excluding estimates for maintenance of the insane department of the State Infirmary and the Bridgewater State Hospital, whose estimates are inseparable from those of the institutions as a whole, which are supervised by the State Board of Charity. They comprise estimates by the State Board and by the State institutions.

ESTIMATES BY THE STATE BOARD.

For traveling, office and contingent expenses, including the printing and binding of the annual report,	\$12,250
The increase in the estimate for traveling, office and contingent expenses, etc., is due to the establishment of a laboratory and to additional expenses for traveling.	
For salaries of officers and employees,	\$45,600
The increase in the estimate for salaries is due to the addition of officers required to promote greater efficiency in the department, including a social service worker.	

For transportation and medical examination of State charges under the supervision of the Board,	\$11,500
The estimate for transportation and medical examination of State charges under the supervision of the Board is \$3,000 less than the appropriation for the previous year.	
For the support of State charges boarded out in families, under the supervision of the Board, or temporarily absent under authority of the same,	\$46,500
The increase in the estimate for the support of State charges boarded out in families provides for an increase in the number.	
For the support of State charges in the Hospital Cottages for Children,	\$10,500
The increase in the estimate for the support of State charges in the Hospital Cottages provides for an increase in the number.	
For investigation as to the nature, causes, results and treatment of mental disease and defect and the publication of the results thereof,	\$2,500
This estimate is the same as the appropriation of the previous year.	

ESTIMATES BY STATE INSTITUTIONS

relate (1) to maintenance expenses, inclusive of repairs and improvements, and (2) special expenditures for new buildings, additions, new furnishings and equipment, in the main.

ESTIMATES FOR MAINTENANCE EXPENSES

of the State institutions have been considered by the Board, as required by section 5, chapter 504, Acts of 1909, and are approved according to the following classification:—

Comparative Estimates for Maintenance during the Fiscal Year, 1914.

It thus appears that the estimates for maintenance of State institutions under the supervision of the Board, exclusive of State Infirmary and the Bridgewater State Hospital, amount to \$3,641,579.89, compared with \$3,387,629.56 expended in 1913,— an increase of \$253,950.33, or 7.49 per cent.

The average number of inmates in these institutions next year it is estimated will be 14,868, compared with 14,176 the past year,— an increase of 692, or 4.88 per cent.

The increase in this year's estimates is largely due to the increase in the number of inmates to be cared for. The estimates for salaries, wages and labor call for an increase of \$129,-559.43, or 51.01 per cent. of the total increase of maintenance expenses. The estimates for food call for an increase of \$58,-123.04, or 22.88 per cent. of the total increase of maintenance expenses. The estimate for repairs and improvements calls for an increase of \$18,779.37, or 7.39 per cent. of the total increase of maintenance expenses. These three items account for 81.28 per cent. of the total increase of maintenance expenses.

The Insane in State Institutions

on Oct. 1, 1913, numbered 13,083, being 1 insane person to every 273+ of the estimated population of the State. Their increase under care for the year was 379, for the past five years, 418, and for the past ten years, 390.

The number of patients in State institutions for the insane, including the sane voluntary, temporary care patients and inebriate women, numbered 13,183 on Oct. 1, 1913. The capacity of these institutions for 1914 will be 12,843, so that there is an overcrowding at the present time of 340 patients, who are sleeping in temporary beds set up in corridors and day rooms and removed daily to make room for patients. There are in process of construction 258 beds, which will not be ready for occupancy, in all probability, before another year has expired. Provided these beds are ready at the close of 1914, it will be seen that with the increased number of patients, viz: 418, the average for five years, there will at that time be a probable overcrowding of 500, while appropriations granted by the Legislature of 1914 will not be available until nearly

two years later. It is therefore necessary that appropriations for accommodations for 574 patients and 263 nurses, planned for this year, be granted.

The Feeble-minded and Epileptic (Sane)

cared for in the two schools for the feeble-minded and the Monson State Hospital, on Oct. 1, 1913, numbered 2,497, and were distributed as follows:—

Massachusetts School for the Feeble-minded,	1,497
Wrentham State School,	423
Monson State Hospital (epileptic), sane,	577

The increase of these two classes for the year was 118, against 270 last year, and 185, the average annual increase for the last five years.

In view of the large number of feeble-minded in the community who are in need of State care and instruction, the Board feels that immediate extensions should be made, and that appropriations requested for the two schools should be granted. It is the opinion of the Board that the Wrentham State School should be completed as rapidly as possible. Plans for 375 patients and 44 nurses have been prepared this year. The Board feels that this is the minimum number to be provided for.

Since the opening of the Wrentham State School in 1907, special attention has been paid to its development, following a definite plan outlined. In view of the fact that this school will have been enlarged, by 1915, to the capacity originally planned, and that at least three years will elapse before buildings can be made ready to accommodate those patients, numbering approximately 1,200, who are now on the waiting lists of the two schools for the feeble-minded, this Board recommends the establishment of *a new school for the feeble-minded*, to be located in the western part of the State.

ESTIMATES FOR SPECIAL APPROPRIATIONS

for the State institutions under the supervision of this Board, together with the plans and specifications prepared by the several boards of trustees, have been considered, as required by section 5, chapter 504, Acts of 1909, and are classified below, accompanied by the opinion of the Board as to their necessity.

Worcester State Hospital.

Constructing and furnishing one cottage for 8 employees,	. . . . .	\$8,000
Constructing and furnishing one bungalow for physician,	. . . . .	5,000
		\$13,000

The above items are approved by the State Board.

In addition, the trustees request an appropriation of \$100,800 for constructing new laundry building and alterations to present laundry to adapt it for dining room. The Board withholds its approval of this item, inasmuch as the estimate is 34 per cent. higher than the estimate submitted last year, and, while it believes in the idea of a central dining-room building, it is of the opinion that further study of this feature is desirable. The trustees also request an appropriation of \$50,400¹ for a cold-storage building and refrigerating apparatus. The Board does not approve this request.

The trustees also request an appropriation of \$2,000 for fitting up of surgery. Owing to the late date at which this was submitted for consideration the Board has been unable to study this item, and therefore withholds approval.

Taunton State Hospital.

Constructing and furnishing house for superintendent,	. . . . .	\$11,500
Constructing fireproof vault,	. . . . .	2,000
Constructing horse barn at Raynham colony,	. . . . .	5,500
		\$19,000

The above items are approved by the State Board.

¹ First approved by State Board. Later the Board disapproved.

Northampton State Hospital.

Additions to women's wards providing accommodations for 10 patients,	\$7,000
Purchase of land and buildings,	20,000
Installation of fire pump,	4,000
	—————
	\$31,000

The above items are approved by the State Board.

The purchase of land and buildings, for which an appropriation of \$20,000 is requested, is an important feature, and is the first step toward the development of a colony which will serve the western part of the State.

In addition the trustees request an appropriation of \$20,000 for alterations in administration building. The Board recommends deferring this until some future time, owing to the necessity of other requests which cannot be deferred.

Danvers State Hospital.

Constructing and furnishing nurses' home to accommodate 61 men and married couples,	\$47,000
Constructing store house and service building,	47,000
Constructing industrial building,	26,000
Constructing farm building at Middleton colony,	13,000
	—————
	\$133,000

The above items are approved by the State Board.

Westborough State Hospital.

Remodeling, renovating and refurnishing female wards 1, 2, 4 and 5,	\$27,500
Constructing fireproof vaults and alterations in administration building necessitated thereby,	5,400
	—————
	\$32,900

The above items are approved by the State Board.

Boston State Hospital.

Constructing and furnishing male infirmary building, to accommodate 300 patients,	\$300,000
Constructing and furnishing women's custodial building No. 2, to accommodate 120 patients,	127,000

Constructing and furnishing kitchen and dining-room building,	\$42,000
Constructing and furnishing nurses' home, east group, to provide for 78 nurses,	60,000
Constructing and furnishing nurses' home, west group, to provide for 84 nurses,	65,000
Constructing and furnishing attendants' home No. 2, to provide for 40 attendants,	24,500
Constructing and furnishing farm cottage No. 2, to accommodate 52 patients,	31,000
Constructing and furnishing industrial cottages Nos. 3 and 4, to accommodate 52 patients,	32,000
Water and sewer service extension,	5,500
	<hr/>
	\$687,000

The above items have been approved by the State Board.

In addition, the trustees request an appropriation of \$11,400 for constructing a horse stable; \$11,700 for constructing two cow barns and milk house; \$9,900 for constructing hay barn. The Board still has these requests under consideration.

Worcester State Asylum.

Purchase of Sinclair house, farm and barn,	\$10,000
Constructing and furnishing two employees' cottages, each to provide for 8,	19,300
Constructing and furnishing two bungalow cottages for 2 employees and families,	10,000
Purchase of boiler,	2,500
Constructing cow barn,	9,000
Cold-storage installation,	16,000
Filter bed enlargement,	25,000
Extension of hot and cold water supply,	4,000
Hydriatic outfit,	5,000
Constructing addition to service building at the Pines,	20,000
Fireproofing rooms and furnishings for same in administration building,	4,000
	<hr/>
	\$124,800

The above items are approved by the State Board.

In addition, the trustees request an appropriation of \$75,000 to construct chapel and recreation hall. Inasmuch as the need of provision for additional patients is so great this year, the Board recommends that this item be deferred until another year.

The trustees also request an appropriation of \$14,833.52 to complete dining room and service building at the Elms. The Board still has this matter under consideration.

Medfield State Asylum.

Constructing and furnishing dispensary building,	\$30,000
Constructing and furnishing cottage for steward,	5,000
	<hr/>
	\$35,000

The above items are approved by the State Board.

Gardner State Colony.

Constructing and furnishing two cottages for 16 patients each,	\$10,800
Constructing barn at Hillcrest cottage,	4,000
Constructing chapel and assembly hall,	15,000
	<hr/>
	\$29,800

The above items are approved by the State Board.

The trustees also ask for appropriations for a slaughterhouse, extension to barn at Belcher, and for purchase of two automobiles. These requests, however, were not submitted in time for the State Board to give them consideration.

Monson State Hospital.

Constructing and furnishing cottage for 8 employees,	\$6,500
Constructing and furnishing additions to kitchen building,	28,500
Constructing paint shop,	2,000
Purchase of mangle and other laundry machinery,	2,400
Installation of baker's oven and fittings,	2,000
Additions to boiler plant,	4,000
Increased water supply,	4,000
	<hr/>
	\$49,400

The above items are approved by the State Board.

In addition, the trustees request an appropriation of \$7,500 for constructing cow barn. The Board recognizes the need for an additional cow barn, but believes this need is a less pressing one than many others, and recommends that this be deferred.

The trustees also request an appropriation of \$7,000 for purchase of electric outfit. The Board has recommended to the trustees that the present contract be extended one year, allowing more careful study of the matter.

Massachusetts School for the Feeble-minded.

Constructing and furnishing cottage for farm foreman,	\$4,000
Constructing and furnishing cottage for assistant physician,	5,000
Constructing and furnishing building for social service and for recreation purposes for employees,	25,000
Constructing water tower,	4,500
Constructing and furnishing cottage for 15 boys at Templeton colony,	3,500
	—————
	\$42,000

The above items are approved by the State Board.

Wrentham State School.

Constructing and furnishing two dormitories to accommodate 210 inmates,	\$102,000
Constructing and furnishing building for hospital to accommodate 100 patients,	60,000
Constructing and furnishing farm group, consisting of two dormitories to accommodate 50 patients, bathroom, dining-room and kitchen additions,	25,000
Constructing and furnishing two homes to accommodate 44 employees,	29,000
Constructing and furnishing home to accommodate 21 officers and teachers, including kitchen and dining room,	34,000
Constructing cow barn and silo for 40 cows,	4,500
Constructing spur track and coal trestle,	29,329
Stone crusher and steam drill,	2,500
Constructing vegetable cellar and storage,	4,800
	—————
	\$291,129

The above items are approved by the State Board.

SUMMARY OF RECOMMENDATIONS FOR SPECIAL APPROPRIATIONS.

Insane.

Constructing, furnishing and equipping buildings for patients and nurses,	\$731,800
Number of patients provided for,	574
Average per capita cost,	\$932 57
Number of nurses provided for,	263
Average per capita cost,	\$747 14
Patients and nurses provided for,	837
Average per capita cost,	\$874 31

Insane—Con.

Land, buildings for officers and employees and for administrative purposes, including furnishing and equipment, improvements and repairs,	\$398,400
Total,	\$1,130,200

Feeble-minded.

Constructing, furnishing and equipping buildings for patients and nurses,	\$219,500
Number of patients provided for,	375
Average per capita cost,	\$508 00
Number of nurses provided for,	44
Average per capita cost,	\$659 09
Patients and nurses provided for,	419
Average per capita cost,	\$523 86
Land, buildings for officers and employees and for administrative purposes, including furnishing and equipment, improvements and repairs,	113,629
Total,	\$333,129

Epileptic (Sane).

Land, buildings for officers and employees and for administrative purposes, including furnishing and equipment, improvements and repairs,	\$24,700
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All Classes.

Constructing, furnishing and equipping buildings for patients and nurses,	\$951,300
Number of patients provided for,	949
Average per capita cost,	\$764 80
Number of nurses provided for,	307
Average per capita cost,	\$734 52
Patients and nurses provided for,	1,257
Average per capita cost,	\$756 80
Land, buildings for officers and employees and for administrative purposes, including furnishing and equipment, improvements and repairs,	536,729
Total,	\$1,538,429

COMPLETION OF THE BOSTON STATE HOSPITAL.

This hospital was formerly owned by the city of Boston, and following a special report of this Board to the General Court in 1908, as to the best method of providing for the insane, the

Legislature made provision for purchase of the then so-called "Boston Insane Hospital" from the city of Boston. On Dec. 1, 1908, it passed into State care, and has since been known as the Boston State Hospital.

The Board employed expert assistance in making a study of the institution, and a comprehensive plan of development was outlined, which is essentially being followed in developing the present hospital into the infirmary branch of the Boston State Hospital.

On Dec. 1, 1908, it had a capacity for 764 patients. Its present capacity, inclusive of the psychopathic department, is 1,287. During the past year there were 1,510 commitments from Boston to hospitals for the insane, of which but 966 were made to the Boston State Hospital because of the restrictions which have of necessity been placed upon admissions to it. Such restrictions will be necessary until sufficient accommodations are provided. The Board believes that this hospital should be rapidly enlarged.

THE METROPOLITAN DISTRICT.

The State Board of Insanity has considered the needs of the metropolitan district, as outlined in its special report to the Legislature of 1913. For the year ending Oct. 1, 1913, there were 2,154 commitments from the metropolitan district to the hospitals for the insane, and, as stated above, but 966 of these were made to the Boston State Hospital. At present it is necessary to send patients from this district to either the Danvers, Worcester, Westborough or Taunton hospitals, all of which are at so great a distance that relatives and friends of patients find it difficult to visit them.

There are now in institutions outside of Boston over 4,000 patients who are residents of the metropolitan district, many of whom, because of the interest of friends, and because of the expense and difficulty of visiting them, should be at a hospital within a reasonable distance. "Nearness to the hospital promotes frequency of visitation, which encourages the patients and serves to maintain and stimulate the interest of friends. The sympathy of the latter leads them to provide many

comforts which would be forgotten without the reminder of their presence."

To satisfy the just demands of the metropolitan district will require the rapid growth of the present Boston State Hospital and the establishment of a second hospital for this district. It is the opinion of the Board that a considerable area of land should be purchased, and that the buildings of this institution be constructed on the cottage or colony plan, to conform to modern methods of caring for the insane. The Board therefore recommends an appropriation of \$100,000 for the purchase of land for the establishment of a hospital for the insane in the metropolitan district.

SOCIAL SERVICE, ETC.

While social service, eugenics work and industrial therapy have been developed to a considerable degree in every institution, each one of these is of great importance and, in the opinion of the Board, should be actively developed. The Board expects to employ an organizer of social service work, who will correlate the work at all of the institutions. Further work in eugenics should be encouraged in those institutions in which it is particularly indicated; *i.e.*, admitting hospitals, the schools for the feeble-minded and the hospital for epileptics. The importance of industrial training has long been understood, but only in recent years has it been actively used as a therapeutic agent, and we believe that this method of treatment should be more thoroughly developed under a director of industries, which this department employs.

NURSES AND ATTENDANTS.

While the various institutions under the supervision of the Board are being constantly confronted with problems requiring special effort to solve, we would like particularly to call your attention to the difficulty which nearly all of our hospitals experience in obtaining a satisfactory grade of nurses and attendants. While each institution has, in past years, found it very hard to maintain a standard of nurses and attendants, there is a constantly increasing difficulty in obtaining the

required number, which now is far more difficult than ever before. At the present time the institutions, probably without exception, would add at least one-third to the number of their nurses if they were able to obtain them. This matter is receiving special study and attention by those most interested, with the hope that some solution can be found to this, the most difficult problem the institutions are facing. A considerably larger amount of money must be provided if this problem is to be satisfactorily solved.

CHANGING THE CHARACTER OF MEDFIELD STATE ASYLUM.

The Board has conferred with the trustees of the Medfield State Asylum relative to the advisability of changing the character of the institution to an admitting hospital for the insane, for the convenient admission of patients in this district. The Board, accordingly, recommends this change.

In conclusion, the Board submits the following summary of recommendations:—

1. Rapid development of the Boston State Hospital.
2. Establishment of a new hospital in the metropolitan district.
3. Establishment of a colony for the insane near Pittsfield.
4. Establishment of a new school for the feeble-minded.
5. The need of a larger number and better quality of nurses and attendants.
6. Further development of social service and eugenics work.
7. Further development of occupational work.
8. Changing the character of the Medfield State Asylum to an admitting hospital for the insane.

RECOMMENDATIONS FOR LEGISLATION.

AN ACT TO ESTABLISH A SCHOOL FOR THE FEEBLE-MINDED.

Be it enacted, etc., as follows:

SECTION 1. In the month of July, nineteen hundred and fourteen, the governor, with the advice and consent of the council, shall appoint seven trustees, five of whom shall be men and two of whom shall be women, who shall hold office from and after the first day of August, nineteen hundred and fourteen; one until the first Wednesday of Feb-

ruary, nineteen hundred and fifteen; one until the first Wednesday of February, nineteen hundred and sixteen; one until the first Wednesday of February, nineteen hundred and seventeen; one until the first Wednesday of February, nineteen hundred and eighteen; one until the first Wednesday of February, nineteen hundred and nineteen; one until the first Wednesday of February, nineteen hundred and twenty; one until the first Wednesday of February, nineteen hundred and twenty-one, or until their successors shall be appointed in accordance with the provisions of section fifteen of chapter five hundred and four of the acts of nineteen hundred and nine. In these trustees and their successors shall be vested the government and management of the school for the feeble-minded established by this act.

SECTION 2. The trustees of said school shall have general charge of the same, and shall see that its affairs are conducted according to law and to regulations established by them. They shall appoint, as soon as may be, a superintendent as their executive officer, who shall be a physician, and who shall, when a suitable building is provided, reside at the school. They shall also appoint assistant physicians, of whom one shall be a woman, and a treasurer, who shall give bonds for the faithful discharge of his duties, with such other officers as they may deem necessary for conducting efficiently and economically the business of the school, and shall determine, subject to the approval of the governor and council, their salaries. They shall establish by-laws and regulations for the government of the school. They shall receive no compensation, but shall be reimbursed all expenses incurred in the performance of their official duties.

SECTION 3. There shall be thorough visitations of the school by two of the trustees thereof monthly, and by a majority of them quarterly, and by the whole board semi-annually, at each of which a written account of the condition of the school shall be prepared, which shall be presented at the annual meeting to be held in December, as provided by chapter two hundred and eleven of the acts of the year nineteen hundred and five. At the annual meeting a full and detailed report shall be made of the condition of the school and all its affairs, with a list of the salaried officers and their salaries, and a copy of the inventory required by law, which shall be laid before the governor and council on or before the third Wednesday in January, for the use of the government, as provided in said chapter two hundred and eleven. The treasurer shall, at the same meeting, present to the trustees his annual report. Both reports shall be made up to the thirtieth day of November inclusive. The trustees shall audit the report of the treasurer and shall transmit it with their annual report to the governor and council. The accounts and books of the treasurer shall at all times be open to the inspection of the trustees.

SECTION 4. The trustees of said school for the feeble-minded shall be

a corporation for the purpose of taking and holding by them and their successors in trust for the commonwealth any grant or devise of land, or any gift or bequest of money or other personal property, made for the use of the institution of which they are trustees, and for the purpose of preserving and investing the same or the proceeds thereof in notes or bonds secured by sufficient mortgages or other securities, with all the powers necessary to carry said purpose into effect; and they shall have authority to expend any gift or bequest, or any part thereof, in the erection of new buildings on the land belonging to said school: *provided*, that all such buildings shall belong to the commonwealth and be managed by said trustees as a part of said school.

SECTION 5. The lands which may at any time be held by the trustees of the said school for the feeble-minded, in trust for the commonwealth for the use of said school shall not be taken for a street, highway, railway or railroad, or for any other purpose without leave of the general court specially obtained.

SECTION 6. The buildings of the said school shall be provided with properly constructed iron fire escapes upon the outside thereof, accessible from the interior by doors or windows, with suitable landings at every story above the first, including the attic, if they are occupied as day rooms or sleeping-rooms for the feeble-minded. They shall also be provided with suitable apparatus for the extinguishment of fire, so constructed and arranged as to be effectively used from the inside or outside of the buildings or parts thereof used for the accommodation of the feeble-minded. The trustees shall provide for a monthly inspection of the fire apparatus belonging to the school and for a proper organization and monthly drill of the officers and employees in the use thereof.

SECTION 7. An annual appropriation shall be made for the support of said school under the provisions of chapter one hundred and seventy-five of the acts of the year nineteen hundred and five.

SECTION 8. Said school shall be under the supervision of the state board of insanity, and said board shall exercise all powers and perform all duties relating to said school that are prescribed by law for institutions under its supervision.

SECTION 9. The said trustees are hereby authorized and directed, with the approval of the state board of insanity, and, after the approval of the state board of insanity has been given, with the further approval of the governor and council, to take by purchase or otherwise a tract of farming or other land suitable in their judgment for the establishment of a school for the care, instruction, custody and control of the feeble-minded, whether children or adults. Said tract may include buildings or chattels thereon. In the event of the taking of said lands and buildings by the said trustees they shall file in the registry of deeds for the county and district within which the same are situated a description of the lands and buildings so taken, with a statement, signed by

said trustees or a majority thereof, that the same are taken under the provisions of this act in the name and behalf of the commonwealth; and the act and time of filing thereof shall be deemed to be the act and time of the taking of such lands and buildings, and shall be a sufficient notice to all persons that the same have so been taken. The title to all lands and buildings so taken shall vest absolutely in the commonwealth and its assigns forever. The commonwealth shall be liable to pay all damages sustained by the owners of such lands or buildings by reason of the taking thereof. Said trustees shall have full power, subject to the approval of the governor and council, to settle by agreement or arbitration the value of the lands and buildings taken as aforesaid; and if not so settled the value shall be assessed by a jury at the bar of the superior court for the county in which the lands and buildings are situated, upon petition, to be filed in the office of the clerk of said court by the persons owning said lands and buildings, within one year after such taking and not afterward.

SECTION 10. The trustees shall obtain plans, and, after they have acquired the land provided for by section nine of this act, they shall, with the approval of the state board of insanity, proceed to construct such buildings as may be required for the establishment of a school for the feeble-minded. They shall submit all plans for buildings to the state board of insanity for its approval, as provided by law for institutions under the supervision of said board, and shall not proceed to construct or repair buildings until such approval has been obtained.

SECTION 11. As soon as the said school is ready for the reception of the feeble-minded, the trustees shall give notice to the governor, who shall make proclamation that upon a given day the said school will be open for the reception of feeble-minded persons.

SECTION 12. The Massachusetts School for the Feeble-minded, the Wrentham State School and the school established by this act shall each maintain a school department for the instruction and education of feeble-minded persons who are within the school age or who in the judgment of the trustees thereof are capable of being benefited by school instruction, and a custodial department for the care and custody of feeble-minded persons beyond the school age or not capable of being benefited by school instruction.

SECTION 13. Persons received by the Massachusetts School for the Feeble-minded, by the Wrentham State School and by the school established by this act shall from time to time be classified in said departments as the trustees shall see fit, and the trustees may receive and discharge pupils at their discretion, and may at any time discharge any pupil or other inmate and cause him to be removed to his home or to the place of his settlement.

SECTION 14. If upon application in writing, a judge of probate finds that a person is a proper subject for the Massachusetts School for

the Feeble-minded, the Wrentham State School or the school established by this act, he may commit him thereto by an order of commitment directed to the trustees thereof, accompanied by the certificate of a physician, qualified as provided in section thirty-two of chapter five hundred and four of the acts of nineteen hundred and nine, that such person is a proper subject for said institution.

SECTION 15. The price for the support of inmates of said school shall be in accordance with the provisions of section eighty-two, chapter five hundred and four, of the acts of nineteen hundred and nine.

SECTION 16. The trustees of said institutions may at their discretion receive, maintain and educate in the school department, any feeble-minded person from this commonwealth, gratuitously or otherwise, upon application being made therefor by the parent or guardian of such person, which application shall be accompanied by the certificate of a physician, qualified as provided in section thirty-two, of chapter five hundred and four of the acts of nineteen hundred and nine, that such person is deficient in mental ability, and that in the opinion of the physician he is a fit subject for said school. Special pupils may be received from any other state or province at a charge of not less than three hundred dollars a year. The trustees may also at their discretion receive, maintain and educate in the school department other feeble-minded persons, gratuitously or upon such terms as they may determine.

SECTION 17. If an inmate of the Massachusetts School for the Feeble-minded, the Wrentham State School or the school established by this act shall have reached the limit of school age or in the judgment of the trustees shall be incapable of being further benefited by school instruction, or if the question of the commitment to or continuance in either of the said schools of any inmate, including inmates who may have been transferred from one department of such school, to another, under the provisions of section sixty-two, of chapter five hundred and four of the acts of nineteen hundred and nine, is in the opinion of the trustees and of the state board of insanity a proper subject for judicial inquiry, the probate court for the counties of Middlesex and Norfolk, and the probate court for the county in which the school established by this act may be situated, respectively, upon the petition in writing of said trustees, or of said board or of any member of either body, and after such notice as the court may order, may, in its discretion, order such inmate to be brought before the court, and shall determine whether or not he is a feeble-minded person, and may commit him to such school or either department thereof, or may order him to be discharged therefrom.

SECTION 18. This act shall take effect upon its passage.

AN ACT TO MAKE THE MEDFIELD STATE ASYLUM A HOSPITAL FOR THE
INSANE AND TO CHANGE ITS NAME.

Be it enacted, etc., as follows:

SECTION 1. The Medfield State Asylum is hereby made a state hospital for the care of the insane and shall be subject to all the provisions of law applicable to such state hospitals.

SECTION 2. The name of the Medfield State Asylum is hereby changed to the "Medfield State Hospital."

SECTION 3. Section fourteen of chapter five hundred and four of the acts of the year nineteen hundred and nine is hereby amended by striking out the word "Asylum" in the twenty-seventh line of said section and inserting in place thereof the word: Hospital,— so that said section as amended shall read as follows: — *Section 14.* The titles of the institutions established by or under the authority of chapter one hundred and thirty-three of the resolves of the year eighteen hundred and thirty, chapter two hundred and fifty-one of the acts of the year eighteen hundred and fifty-one, chapter four hundred and fifty-four of the acts of the year eighteen hundred and fifty-five, chapter two hundred and thirty-nine of the acts of the year eighteen hundred and seventy-three, chapter two hundred and twenty-seven of the acts of the year eighteen hundred and seventy-seven, chapter three hundred and twenty-two of the acts of the year eighteen hundred and eighty-four, chapter four hundred and fourteen of the acts of the year eighteen hundred and eighty-nine, chapter four hundred and twenty-five of the acts of the year eighteen hundred and ninety-two, chapter four hundred and eighty-three of the acts of the year eighteen hundred and ninety-five, chapter four hundred and fifty-one of the acts of the year nineteen hundred, chapter five hundred and eight of the acts of the year nineteen hundred and six, and chapter one hundred and thirty-one of the acts of the year eighteen hundred and thirty-nine as altered by chapter six hundred and thirteen of the acts of the year nineteen hundred and eight, shall be respectively Worcester State Hospital, Taunton State Hospital, Northampton State Hospital, Danvers State Hospital, Worcester State Asylum, Westborough State Hospital, Foxborough State Hospital, Medfield State Hospital, Monson State Hospital, Gardner State Colony, Wrentham State School and Boston State Hospital.

SECTION 4. This act shall take effect upon its passage.

AN ACT TO INCREASE THE RATE OF SUPPORT FOR INSANE PERSONS
BOARDED OUT IN FAMILIES.

Be it enacted, etc., as follows:

SECTION 1. Section seventy-one of chapter five hundred and four of the acts of the year nineteen hundred and nine is hereby amended by striking out the word "twenty-five" in the fourteenth line and inserting

in place thereof the word:—seventy-five,— so that the section shall read as follows:— *Section 71.* Any patient in an institution, public or private, used wholly or in part for the care of the insane, who is quiet and not dangerous nor committed as a dipsomaniac or inebriate, nor addicted to the intemperate use of narcotics or stimulants and who is under the supervision of the state board of insanity, may be placed by said board if it considers it expedient, at board in a suitable family or place in the commonwealth or elsewhere. Any such patient in a public institution used wholly or in part for the care of the insane may so be boarded by the trustees thereof, and such boarder shall be deemed to be an inmate of the institution. The cost to the commonwealth of the board of such paupers shall not exceed three dollars and seventy-five cents a week for each person.

SECTION 2. This act shall take effect upon its passage.

AN ACT TO PROVIDE FOR A NEW BOARD OF TRUSTEES FOR THE FOXBOROUGH STATE HOSPITAL.

Be it enacted, etc., as follows:

SECTION 1. From and after the first Monday of September, nineteen hundred and fourteen, the trustees of the Foxborough State Hospital shall have no further power or authority over the Foxborough State Hospital, but shall continue to exercise the power and authority heretofore given them over the Norfolk State Hospital, subject to the supervision of the state board of charity. From and after the first Monday of September, nineteen hundred and fourteen, said trustees shall be known as the trustees of the Norfolk State Hospital.

SECTION 2. In the month of July, nineteen hundred and fourteen, the governor, with the advice and consent of the council, shall appoint seven persons, five of whom shall be men and two of whom shall be women, who shall, from and after the first Monday of September, nineteen hundred and fourteen, constitute the board of trustees of the Foxborough State Hospital, and who shall hold their offices from said first Monday of September, one until the first Wednesday of February, nineteen hundred and fifteen, one until the first Wednesday of February, nineteen hundred and sixteen, one until the first Wednesday of February, nineteen hundred and seventeen, one until the first Wednesday of February, nineteen hundred and eighteen, one until the first Wednesday of February, nineteen hundred and nineteen, one until the first Wednesday of February, nineteen hundred and twenty, one until the first Wednesday of February, nineteen hundred and twenty-one, or until their successors shall be appointed. Said trustees shall from and after the first Monday of September, nineteen hundred and fourteen, have all the power and authority over the Foxborough State Hospital now exercised by the present trustees of the Foxborough State Hospital, and

shall be subject to all the provisions of law relating to trustees of state hospitals for the care of the insane.

SECTION 3. Section fifteen of chapter five hundred and four of the acts of the year nineteen hundred and nine is hereby amended by striking out in the fourth and fifth lines the words "except that the trustees of the Foxborough State Hospital shall all be men."

AN ACT TO INCREASE THE NUMBER OF ANNUAL REPORTS OF THE MEDFIELD STATE HOSPITAL.

Be it enacted, etc., as follows:

SECTION 1. Chapter nine of the Revised Laws is hereby amended as follows:— by striking out in line one hundred and thirty-eight, after Medfield, the words "Insane Asylum, fifteen hundred" and inserting in place thereof the words:— State Hospital, two thousand,— so that the clause shall read:— "and of the Medfield State Hospital, two thousand copies."

SECTION 2. This act shall take effect upon its passage.

RESOLVE TO PROVIDE FOR THE PURCHASE OF LAND FOR A HOSPITAL FOR THE INSANE OF THE METROPOLITAN DISTRICT.

Resolved, That there be allowed and paid out of the treasury of the commonwealth, a sum not exceeding one hundred thousand dollars, to be expended under the direction of the state board of insanity, subject to the approval of the governor and council, for the purchase of land for the establishment of a hospital for the insane of the metropolitan district.

FINANCIAL STATEMENT.

Financial Statement of the Board for the Fiscal Year ending Nov. 30, 1913.

	Balance brought forward by State Auditor.	Appropriations.	APPROPRIATIONS AND RECEIPTS.				Totals,
			Family Care.	State Institutions.	Refunds.	Interest on Bank Account.	
Traveling, office and contingent expenses,	-	\$10,500 00	-	-	-	-	\$10,500 00
Salaries and wages of officers and employees,	-	43,000 00	-	-	-	-	43,000 00
Transportation and medical examination of State charges,	-	14,500 00	-	-	\$143 69	-	14,643 69
Support of State charges boarded out in families,	-	46,000 00	-	-	1 00	-	46,001 00
Support of State charges in Hospital Cottages for Children,	-	9,500 00	-	-	-	-	9,500 00
For investigation as to the nature, causes, results and treatment of mental disease and defect and the publication of the results thereof.	-	2,500 00	-	-	-	-	2,500 00
Payment of damages and other expenses incurred in the taking of land for the Boston State Hospital, chapter 65, Resolves of 1911.	\$9,452 22	150,000 00	-	-	-	-	159,452 22
To provide for investigation of social service work for prevention of insanity and subsequent care of the mentally ill, chapter 841, Acts of 1913.	-	200 00	-	-	-	-	200 00
Cash received in reimbursement for the support of patients,	-	-	\$1,841 26	\$15,570 92	-	\$78 01	47,490 19
		\$276,200 00	\$1,841 26	\$45,570 92	\$144 69	\$78 01	\$33,287 10

Financial Statement of the Board for the Fiscal Year ending Nov. 30, 1913 — Concluded.

	EXPENDITURES AND REMITTANCES.				Totals.
	Expenditures from Appropriations.	Balance.	Paid to State Institutions.	Paid to State Treasurer.	
Traveling, office and contingent expenses,	\$10,478 33	\$21 67	—	—	\$10,500 00
Salaries and wages of officers and employees,	41,213 24	1,786 76	—	—	43,000 00
Transportation and medical examination of State charges,	14,575 90	67 79	—	—	14,643 69
Support of State charges boarded out in families,	42,769 76	3,231 24	—	—	46,001 00
Support of State charges in Hospital Cottages for Children,	9,437 94	62 06	—	—	9,500 00
For investigation as to the nature, causes, results and treatment of mental disease and defect and the publication of the results thereof.	2,494 56	5 44	—	—	2,500 00
Payment of damages and other expenses incurred in the taking of land for the Boston State Hospital, chapter 65, Resolves of 1911.	119,848 46	39,603 76	—	—	159,452 22
To provide for investigation of social service work for prevention of insanity and subsequent care of the mentally ill, chapter 341, Acts of 1913.	—	200 00	—	—	200 00
Payments of cash received in reimbursement for the support of patients,	—	—	\$45,564 25	\$1,925 94	47,490 19
	\$240,818 19	\$44,978 72	\$45,564 25	\$1,925 94	\$333,287 10

FAMILY CARE OF THE INSANE UNDER THE STATE BOARD.

Under chapter 504, section 71, Acts of 1909, the Board places in private families certain suitable inmates of the institutions under its supervision. For a full report of this work as conducted by the Board and by the trustees of certain institutions, see page 136.

THE SUPPORT DEPARTMENT.

For the year ending Nov. 30, 1913, the visitors of this department have made 131 visits to the hospitals, and have taken the histories of 3,703 patients who were committed as public charges. It is the duty of this department to ascertain in the first instance whether the patients have a legal claim for support upon this State and, therefore, a right to remain in our institutions, and, secondly, if they have such rights, to determine whether there are any relatives who are able to support them wholly or in part. It is, therefore, necessary to make many visits to the families and relatives of the patients to ascertain these facts. During the year 1,729 such visits were made.

In every case where it appears after investigation that the patient has a claim upon some other country or some other State in the United States for care and treatment, the facts proving such claims are submitted to the deportation department of the Board for action.

Where the patients are entitled to remain in our institutions, and support can be secured, arrangements are made for said support and the rate determined upon is referred to the Board for their approval. In 144 cases either the patient or relatives liable for his support were found to have sufficient means to have him supported privately at the hospital, and the hospitals were notified by this department, and 133 such cases were made private during the year. The remainder were pending at the close of the year.

Three hundred and sixty-eight patients were made reimbursing at varying rates according to their ability, the maximum being \$5 per week.

In conducting all these investigations and in determining whether the patients should be made private or reimbursing, it is the purpose of this department that no hardship shall be entailed upon either the patient or those who are called upon for support.

The provisions of chapter 504 of the Acts of 1909, concerning the appointment of guardians, the sale of real estate by guardians, and the final accounts of guardians, all of which matters must come to the notice of the Board under the provisions of the law, have been of great help to the department. While the office work has been increased by the enactment of those laws, the increased returns to the State have more than compensated for the additional labor involved.

The following statement shows in detail the work of this department for the year ending Nov. 30, 1913:—

Visits to the hospitals,	131
Histories taken at the hospitals,	3,703
Visits to relatives of patients and others for investigation, . . .	1,729
Cases submitted for deportation to the United States Commissioner of Immigration,	149
Cases submitted for deportation by the Board,	187

Support Cases.

Cases pending Nov. 30, 1912,	519
New cases,	825
	— 1,344
Made private,	133
Made reimbursing,	368
Accepted as State charges,	495
Pending Nov. 30, 1913,	348
	— 1,344

Private Cases.

Cases pending Nov. 30, 1912,	23
New cases reported to the hospitals,	144
	— 167
Reported by hospitals as having been made private,	133
Made reimbursing,	3
Dropped, accepted as State charges,	9
Pending Nov. 30, 1913,	22
	— 167

Reimbursing Cases.

Cases remaining Nov. 30, 1912,	764
New cases,	368
	— 1,132
Made private of the above,	8
Died,	114
Discharged or on visit Nov. 30, 1913,	164
Dropped, accepted as State charges,	62
Remaining in hospitals Nov. 30, 1913,	784
	— 1,132

Number and Board Rates of Reimbursing Patients for the Year ending Nov. 30, 1913.

INSTITUTION.	DAILY AVERAGE NUMBER.		NUMBER Oct. 1, 1913.		UNITED STATES DEPORTATION CASES.	
	Males.	Females.	Males.	Females.	Daily Average Number.	Average Weekly Per Capita Rate.
Worcester Hospital,	44.63	77.30	\$3 35	47	67	\$5 00
Taunton Hospital,	32.32	42.64	3 31	35	49	5 00
Northampton Hospital,	41.75	52.57	3 08	42	55	1.29
Danvers Hospital,	44.27	91.85	3 23	49	104	1.82
Westborough Hospital,	33.08	60.57	3 21	35	59	1.39
Boston Hospital,	25.19	45.40	3 21	23	56	1.20
Worcester Asylum,	25.12	24.15	3 11	20	24	—
Medfield Asylum,	19.65	43.19	3 21	17	36	—
Gardner Colony,	3.47	3.85	2 74	6	2	—
Monson Hospital,	9.47	17.44	2 05	14	21	.04
Foxborough Hospital,	5.67	—	2 87	9	—	—
School for the Feeble-minded at Waltham,	1.00	1.99	3 35	4	3	—
Wrentham School,	1.44	4.94	2 49	2	5	—
Mental Wards, State Infirmary,	—	4.08	3 59	1	7	.99
Bridgewater Hospital,	6.54	—	3 10	5	—	—
Hospital Cottages for Children,	—	.25	51	2	1	—
Family care,	—	11.90	2 98	—	17	—
Totals,	283.52	482.12	\$3 19	311	506	10.14

Receipts for Support of Reimbursing Patients.

LOCATION OF PATIENTS.	Year ending Nov. 30, 1912.	Year ending Nov. 30, 1913.	Total since Jan. 1, 1904.
Worcester Hospital,	\$21,065 25	\$21,752 07	\$158,256 95
Taunton Hospital,	14,340 55	13,423 51	115,890 07
Northampton Hospital,	14,688 82	15,441 97	119,496 38
Danvers Hospital,	25,194 79	23,318 84	197,904 45
Westborough Hospital,	14,586 92	15,998 13	118,294 94
Boston Hospital,	9,770 98	12,238 58	51,484 26
Worcester Asylum,	6,859 49	8,067 59	56,449 13
Medfield Asylum,	12,686 71	11,817 36	80,195 43
Gardner Colony,	1,059 93	1,041 71	9,297 61
Monson Hospital,	3,464 67	3,886 06	22,660 13
Foxborough Hospital,	1,763 48	844 96	5,108 75
School for the Feeble-minded at Waltham, .	763 20	530 96	4,000 12
Wrentham School,	492 89	826 08	1,539 10
Mental Wards, State Infirmary,	2,813 10	1,019 50	10,547 65
Bridgewater Hospital,	641 59	1,053 66	4,497 07
Hospital Cottages,	—	6 67	673 37
Family care,	1,874 12	1,841 26	9,370 30
Foxborough (labor),	993 46	709 32	3,230 73
Almshouses,	—	—	923 66
Totals,	\$133,059 95	\$133,818 23	\$969,820 10

Average Numbers and Percentages of State, Reimbursing and Private Patients during the Year ending Sept. 30, 1913.

	STATE.		REIMBURSING.		PRIVATE.		Total Average Number.
	Average Number.	Percentage.	Average Number.	Percentage.	Average Number.	Percentage.	
Insane:—							
Public institutions,	11,488	88.40	737	5.67	771	5.93	12,996
Family care,	258	83.50	12	3.88	39	12.62	309
Totals, public,	11,746	88.28	749	5.63	810	6.09	13,305
Private institutions,	—	—	—	—	429	—	429
Totals, public and private,	11,746	85.53	749	5.45	1,239	9.02	13,734
Other classes:—							
Public institutions,	2,622	94.73	27	.97	119	4.30	2,768
Private institutions,	—	—	—	—	65	—	65
Totals, public and private,	2,622	92.55	27	.95	184	6.50	2,833
Insane and other classes,	14,368	86.72	776	4.68	1,424	8.60	16,568

DEPORTATION.

There were considered for deportation 442 cases, compared with 378 for the previous year. The Board deported 69 to other States, 96 to other countries,—in all 165. In addition, the United States Immigration Commissioner deported 109. Altogether, 274 have been deported since Dec. 1, 1912.

Since Oct. 1, 1888, 1,835 persons have been deported by the Board, of whom 52 returned once, 12 twice and 1 five times. Of those returning, 12 are now in institutions in this State.

Details of the disposition of cases under consideration for deportation are shown in the following table:—

	STATE BOARD.		UNITED STATES IMMIGRATION COMMISSIONER.		TOTALS.		TOTALS.		TOTALS.		Increase.
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
Cases pending, Nov. 30, 1912,	52	25	77	6	3	9	58	28	86	91	
Since reported,	148	78	226	80	50	130	228	128	356	356	73
Total cases under investigation,	200	103	303	86	53	139	296	156	442	378	64
Deported, Viz.: Other States,	117	48	165	67	42	109	184	90	274	216	58
Other countries,	33	31	69	—	—	—	38	31	69	69	3
Discharged,	79	17	96	67	42	109	146	59	205	150	55
Viz.: Care of friends,	20	9	29	7	—	7	27	9	36	36	12
Viz.: Escaped, Returned to penal institutions,	15	9	24	6	—	6	21	9	30	18	12
Died,	2	2	2	1	—	1	3	—	3	1	2
Withdrawn,	3	3	3	3	1	1	2	3	5	5	1
Viz.: Private patients,	2	1	4	5	6	12	7	10	17	18	4
United States cases,	1	3	4	—	—	1	3	4	3	4	1
Rejected by Immigration Commissioner,	—	1	1	1	—	—	1	1	—	1	1
Dropped from further consideration,	10	14	24	—	—	6	12	6	15	12	31
Viz.: Impracticable to deport,	9	9	16	—	—	—	10	14	24	23	41
No place to go,	3	5	8	—	—	—	3	5	8	6	3
Total cases closed,	150	76	226	81	49	130	231	125	356	292	64
Cases pending Nov. 30, 1913,	50	27	77	5	4	9	55	31	86	86	—
Viz.: Under sentence,	9	9	9	12	1	—	1	10	11	10	1
Not in condition to deport,	6	6	12	—	—	4	6	6	12	22	10
Awaiting action,	36	21	56	4	—	8	39	25	53	64	9

1 Decrease.

TRANSFERS.

Seven hundred and eighty-five patients have been transferred within the year: 558 between public institutions; 177 between public institutions and families; 37 between public and private institutions; and 13 between private institutions.

THE FINANCIAL DEPARTMENT.

The State Board of Insanity established, in 1906, a financial department to inquire, for each institution, into the prices paid for each individual purchase, the methods employed, the results obtained, and the manner of conserving and distributing supplies, etc. It was required that the financial agent should be familiar with auditing, accounting, banking, finance and business methods.

Before entering upon a description of the procedure of the financial department it seems proper to interpolate a brief outline of the organization of the thirteen institutions with which it deals. Each has a board of trustees appointed by the Governor and Council, a superintendent appointed by the trustees, and, with three exceptions, a purchasing agent or steward appointed by and responsible to the trustees and superintendent. Where there is no steward the superintendent acts in that capacity.

The financial agent first examined, and continues to examine, all the bills of each institution. He noted and compared the prices paid for all classes of purchases. As the analysis and comparison of items of expenditure proceeded it was disclosed that many grades and varieties of merchandise were bought, and that there prevailed little harmony in practice or thought as to which grade of many things commonly used throughout the institutions was most satisfactory for their needs.

A similar lack of uniformity appeared in the methods of buying, that is, by competitive bids, at times of depressed markets, or the periodical renewal of supplies exhausted at the end of the week, month, etc. Much buying in small quantities and from retailers was also discovered.

In view of this disparity the idea was early conceived that

a system of bulletins issued to each institution, which should contain a description of the articles bought by each, their grade, brand, character and price, would at least serve to give all the knowledge of what each was doing.

The steps intermediate between the old method of individual buying which prevailed at the time the financial department was established and those which obtain at the present time are too numerous for detailed description. They have covered seven years and the evolution has been gradual. It will, perhaps, be sufficiently explanatory to say that the department, by a series of bulletins and letters covering a great variety of subjects, has given to all institutions the results of its own investigations and research, and to all a knowledge of the best and worst of the procedure and results of each. This interinstitutional publicity soon caused the worst to be abandoned and the best imitated by all. If one institution was paying more than the others for any commodity it soon discontinued doing so upon being informed of the fact, and the institution obtaining the best article for the lowest price was bombarded with questions by the others, that they might do likewise.

At present the department examines each bill of every institution. No purchase escapes its scrutiny. Any unusual procedure or price is made the subject of immediate investigation. It issues monthly bulletins. These price bulletins cover the most important articles of merchandise bought, and as many more as the size of the clerical force permits; and in this connection it may be stated that to publish the price paid for everything purchased only means an adequate number of clerks for the purpose.

Many lines of inquiry are instituted as from time to time during the year they become important, and the results published. The department also compares the farms of the institutions on a uniform price basis.

The financial agent visits each institution to inspect the quality of goods in store, methods of storage, distribution, etc., and investigates all institutional internal economies, recommending change if in his judgment it is necessary. He annually makes an inventory of real and personal property at each institution, figures the effect of depreciation as opposed to

renewal, notes the physical condition of the property, and is thus enabled to more intelligently estimate the financial requirements for the coming year and to trace out excessive loss and consumption. The department obtains from the institutions the information necessary to tabulate the financial tables which appear in this report. (See page 267 *et seq.*)

The institutions devoted to the care of the insane, feeble-minded, epileptic and inebriate expended for merely the maintenance of these classes, exclusive of extensions and additions, the sum of approximately \$3,600,000 in 1913. This is a large sum, and in the judgment of the financial agent, where advantage can be obtained by so doing, its purchase power should be pooled and not dissipated in fragments. In other words, this department believes that these thirteen institutions should establish, so far as is practicable, standard grades for the supplies they use in common, and should unite in purchasing the same where it is advantageous to do so, thereby greatly increasing the size of their orders, and they should take advantage of the low markets which occur at quite regular intervals in most commodities, and should ask for bids on definite specifications, which bids shall be entertained from all who care to compete.

The formulation of specifications is necessarily subsequent to the establishment of grades, which latter line of endeavor involves the employment of chemical determination in many instances, and the financial agent has in the past employed public commercial chemists from time to time to analyze the more important commodities purchased, such as coal, flour, etc., the reports upon which he has distributed to the institutions. This method proved very expensive, owing to the number of samples submitted and the many articles of merchandise to be investigated. It was thought that the amount of this work which the department required would justify the establishment of a chemical laboratory which should be entirely at its disposal.

Accordingly, in June, 1912, a competent and experienced commercial chemist was employed. He devotes his whole time to the analysis of samples submitted. He analyzes samples of butter, coal, flour, molasses, syrup, lubricating oils, soap, disinfectants, baking powder and many other articles of merchan-

dise, 280 reports having been received by the financial department and by it distributed to the institutions from Dec. 1, 1912, to Nov. 30, 1913, and in time he will proceed through the entire list of articles purchased, which by their nature may be subjected to chemical analysis.

The financial agent takes pleasure in stating that in an effort toward the betterment of purchasing methods and standardization he has received most cordial co-operation and assistance from the institutions themselves.

COAL.

Coal is a very important purchase. The requirements of thirteen institutions for the twelve months beginning with June, 1913, being 50,500 tons of semibituminous and birdseye coal, the following advertisement was inserted in ten Boston, Worcester and Springfield papers:—

The institutions named below invite bids for supply until June 1, 1914, in cargo or in car lots, or delivered in bins, as specified, of some 45,100 tons approximately, of 2,240 pounds each, of semibituminous steaming coal of good quality; and 5,400 tons of birdseye coal, of 2,240 pounds each, required by the following State institutions:—

	Approximate Number of Tons required.
Worcester State Hospital,	5,000
Taunton State Hospital,	2,000
Northampton State Hospital,	2,000
Danvers State Hospital,	6,000
Westborough State Hospital,	5,000
Boston State Hospital,	7,000
Worcester State Asylum,	6,400
Medfield State Asylum,	6,000
Gardner State Colony,	1,700
Monson State Hospital,	3,000
Foxborough State Hospital,	2,000
Massachusetts School for the Feeble-minded,	3,000
Wrentham State School,	1,400
<hr/>	
	50,500

Bids are invited for the supply of each or all or any group of the places above designated, and the bidder must name in his proposal the institutions and quantities of coal which he intends to supply.

In his proposal the bidder must state the name or other designation of the coal bed or seam, the name of the mine or mines from which the

coal or coals are to come, and the State, county or township where such mine or mines are located.

Combined forms of bids and specifications for all the institutions may be obtained from any of those named in the foregoing list, or from E. R. Libby, Room 6, State House, Boston, Mass., on and after Wednesday, May 7, and only bids on these forms and containing without alteration all the information asked for will be considered.

Each institution reserves the right to reject any or all bids.

A bond satisfactory to each institution may in each case be required, not in excess of 20 per cent. of the amount of the contract.

The proposals should be enclosed in an envelope sealed and addressed to the Coal Committee of the Associated Purchasing Agents, care of the Boston State Hospital, Dorchester Center, Mass. Bids signed by the bidder and left at this place before 10 o'clock in the forenoon of Wednesday, May 14, 1913, with a certified check for 4 per cent. of the amount of each contract bid upon, each check being made payable to the order of the institutions to which bids are submitted to be and become the property of said institutions if the bids after acceptance are not carried out, will then and there be publicly opened and read.

For the Committee,

MELVILLE L. STACY.

OTIS E. WHITE.

ELMER R. LIBBY.

Bids were publicly opened May 14 at the Boston State Hospital. Twenty-four firms bid, some on the supply for one institution, others on a greater number, and it may be pertinent to state here that it has not been the experience of this department that any one dealer was in a position to furnish the entire supply for all this group of institutions, at least no one has ever done so, although the proposition has been open for several years.

The idea of buying coal on the basis of the price per ton has long since been supplanted by the more modern method of purchasing on a basis of the amount of heat content or British thermal units per ton, thus eliminating the possibility of paying so much per ton for slate, metal or other impurities. In accordance with this theory the awards were all made to the lowest bidder per million British thermal units computed according to Bulletin 428 of the Department of the Interior. This purchase involved the expenditure of a sum in excess of \$200,000. The form of proposal, bond and contract was the same for each

institution, and the contract contained a clause exacting a price reduction for the supply of coal below the standard established in the specifications.

The chemist has analyzed and reported on 117 samples of coal since the 1st of December of the current fiscal year. Many were found to comply with the specifications; others did not, and approximately \$2,700 have been saved to the Commonwealth by the rigidity of the contract and the closeness with which the analyses have been made. By this method the institutions are protected against the supply of coal of an inferior grade, and are at all times aware of the grade which they are receiving. They do not have to handle excessive quantities of ash, involving the employment of much expensive labor in its disposition. Further, the heating and lighting apparatus at the institutions are not subjected to the damage caused by the employment of a poor grade of coal.

FLOUR.

The determination of a proper standard for flour is very difficult, less pioneer research work having been done in this direction than on most any other important edible.

The chemical laboratory has been actively engaged in the investigation of this commodity. It has confirmed its chemical analysis by baking tests that show the size, texture and palatability of the loaf of bread obtained by the use of each brand. With the assistance of this information and the best advice obtainable from dealers and purchasing agents, the institutions have united on a uniform set of tentative specifications.

The following advertisement was inserted in eleven papers in Boston, Worcester and Springfield:—

The Massachusetts institutions for the care of the insane and feeble-minded invite bids for a three months' supply of flour, approximating barrels. Forms for proposals and specifications may be obtained of E. R. Libby, Room 6, State House, Boston, Mass.

The bids will be publicly opened and read at This quantity represents approximately three months' supply for the institutions in the combination, and calls for some 25 carloads of flour. The essential parts of the specifications are as follows:—

To be hard wheat flour, water content not over 13.5 per cent., ash not more than .56 per cent., acidity not higher than .20 per cent. (calculated as lactic acid), protein ($N \times 6.25$) not less than 10.5 per cent. The flour must be capable of yielding a loaf of satisfactory volume and texture, when baked, by the Koelner system of flour testing (a more minute description of which will be furnished upon request).

The analysis of the chemist of the State Board of Insanity shall be deemed final. The sample taken from each carload shall weigh not less than 5 pounds and be representative of not less than 10 of the sacks or barrels contained in the car. Should the analysis test indicate the flour to be of lower grade than the specifications call for, the shipment may, at the option of the institution, be rejected, and shall be removed at the vendor's expense. In this case the institution shall have the privilege of purchasing in the open market at the then prevailing price, until a satisfactory shipment shall have arrived. Any excess in the price paid over that agreed upon in the contract shall be borne by the said vendor.

This form of proposal or contract was adopted tentatively after investigation had disclosed that flour cannot be bought accurately by brands named. It was experimental, and the results proved that the theory of buying flour on chemical analyses was a good one, and that the practice of employing this method in purchasing should be continued. However, it was the opinion of the representatives of the institutions that the specifications did not call for a sufficiently high grade of flour, and it was therefore voted that they should be so altered as to call for a grade higher than that obtained. This second set of specifications will be incorporated into the next proposal.

MEAT.

It is more difficult to standardize and form specifications for the purchase of meat than for most other kinds of food; therefore, although mature consideration has been given the subject and exhaustive investigations made, it has been deemed advisable not to buy on specifications. Where the geographical position of the institutions will permit bids are obtained, but the best results seem to be had where the purchasing agent personally inspects the quality and size before buying.

BUTTER.

In the fiscal year under consideration the group of institutions supervised by this Board required for cold-storage purposes approximately 84,000 pounds of butter. Investigation and discussion led to the conclusion that better results could be obtained by asking for bids under the well-known classifications of the Boston Chamber of Commerce in preference to relying upon chemical specifications; consequently, bids were requested on this quantity of butter under the classification of "creamery extras," "creamery firsts," etc. The privilege was reserved to have the butter inspected by an official inspector of the Boston Chamber of Commerce. Thirteen bids were received, and the award was to the lowest bidder.

EGGS.

Three thousand one hundred and fifteen cases of eggs, or 93,450 dozen, were the requirements of the institutions for twelve months. In April bids were invited from all dealers. Thirty-nine firms applied for blanks on which to bid; seventeen submitted prices. Contracts were awarded to the lowest bidder. This purchase involved in excess of \$20,000. The price averaged 21 cents (the price for each institution is not necessarily the same, as, to the price at a common point, such as Boston, is added the freight to the delivery point, — Danvers, Taunton, etc.). The present quotation on this grade of eggs is 36.5 cents. Eggs are usually lowest and best at this time of year.

DRIED AND EVAPORATED FRUITS.

Bids were obtained on a year's supply for all institutions, and the award was to the lowest bidder. It is interesting to know that several concerns refused to bid on this order, writing and stating as their reason that the size of the order was so great, and the market conditions so uncertain, and information as to the available supply so vague, that they were reluctant to tie themselves up with the order. The institutions which had previously obtained individual bids for purposes of comparison with those submitted in competition received more favorable quotations than were submitted on the larger order.

DRIED BEANS.

Bids were obtained on a year's supply for all institutions; they were opened Jan. 15, 1913. Ten bids were received. Contracts were awarded to the lowest bidder.

CROCKERY.

In his inspection of the institutions, and particularly in placing values on crockery, in the process of taking the annual inventory, the financial agent found many different grades being used. The needs seemed so common to all that he suggested a standard be adopted. The purchasing agents responded with their usual willingness to a reasonable request, and after discussion and comparison united on semivitrified ware and a uniform size of plates, cups, saucers, etc. On these, bids were requested, to which there were only two responses. The award for a year's supply was to the lower bidder.

SUMMARY.

The method of purchasing many other staples, such as electric lamps, prunes, lubricating oils, stationery, and so on through an endless list, might be taken up and described, but it would seem that enough detail has been submitted to implant the conviction that the Board of Insanity through its financial department examines every purchase, and that it encourages its institutions to buy in accordance with the most approved modern methods. The financial department assists the institutions in buying a supply of large staples at the period of low market — which occurs annually in most articles of merchandise — in sufficient quantity to tide over the intervening period of higher quotations. It believes in increasing the size of an order to the point where the greatest economy will be effected, the adoption of uniform standards so far as is practicable, and in buying on a competitive basis in the open market.

The institutions readily co-operate with it in carrying into effect these principles, with the result that we have a body of fourteen men, co-ordinated and harmonious in an endeavor to labor faithfully for the common good, and to give to all the best in each, with only a friendly rivalry as to who shall give the

most. The actions taken and results obtained are the products of consultation, discussion and study, fourteen minds having contributed a share, each helping, each correcting, the others, the more or less erratic workings of each mind being helped by association with the others.

It is extremely hard to give a verbal description of the many functions, duties and methods of the department.

FINANCIAL TABLES.¹

Table 1, or the Balance Sheet, shows in a condensed form the total inventory of all the institutions at the beginning and end of the fiscal year, the sums appropriated for maintenance and extensions or additions, — the latter under the name of "Special Appropriations," — and the sums expended therefrom. The tables which follow proceed in numerical progression to dissolve the subject-matter of the first or summary table into more and more minute detail. An examination of the entire series should disclose all of the financial operations of this group of institutions in the period under consideration, and the physical condition of the property at the beginning and end of such period as represented by the sum total of the inventories. From these tables may be deduced the sufficiency or insufficiency of the sums expended to maintain the State's property in good condition, and a careful analysis of the detail will show the degree of wisdom with which the money has been expended.

GENERAL MATTERS.

NEW LEGISLATION.

The following acts and resolves relative to the institutions and persons under the supervision of the Board were passed by the Legislature of 1913: —

Chapter 404. — An Act relative to trespassing upon the land of certain public institutions.

Chapter 796. — An Act relative to departments for defective delinquents.

Resolves, Chapter 117. — Resolve to provide for the appoint-

ment of a commission to investigate and report in regard to drunkenness.

Resolves, Chapter 85. — Resolve to provide for an investigation of impediments to marriage.

Resolved, That the state board of health and the state board of insanity are hereby empowered and directed jointly to investigate, and to report to the general court, on or before the second Saturday of January next, what further impediments to marriage, if any, should be recognized by law in this commonwealth. If they make any recommendations they shall include in their report drafts of bills suitable for carrying them into effect. [Approved May 8, 1913.]

Resolves, Chapter 120. — Resolve to provide for an investigation of social service work for the prevention of insanity and the subsequent care of the mentally ill.

Resolved, That the state board of insanity shall at once proceed to investigate the establishment, in connection with each state hospital for the care of the mentally ill, of social service work having for its purpose the prevention of insanity and the subsequent care of discharged patients, and shall report its findings and recommendations to the next general court, not later than the second Wednesday of January. [Approved June 13, 1913.]

SPECIAL APPROPRIATIONS.

The special appropriations for the year 1913 and for five, ten and fifteen year periods are shown in the following tables: —

Detailed Statement.

	1913.	Five Years, ending 1913.	Ten Years, ending 1908.	Fifteen Years, ending 1913.
Worcester Hospital: —				
Constructing and furnishing one cottage for employees,	\$8,975 00			
Alterations, female nurses' home, to provide accommodations for 22 additional nurses,	8,000 00			
Finishing and furnishing old farm house,	4,600 00			
New sewer pipe line,	7,500 00			
[Resolves, chapter 133.]				
Total,	\$29,075 00	\$144,775 00	\$299,098 44	\$443,873 44
Taunton Hospital,	—	\$146,300 00	\$325,205 00	\$471,505 00
Northampton Hospital: —				
Purchase and installation of boilers, [Resolves, chapter 133.]	\$10,000 00	\$56,925 00	\$217,300 00	\$274,225 00

Detailed Statement — Continued.

	1913.	Five Years, ending 1913.	Ten Years, ending 1908.	Fifteen Years, ending 1913.
Danvers Hospital,	-	\$17,850 00	\$364,100 00	\$381,950 00
Westborough Hospital: —				
Additions and alterations on women's wards,	\$13,000 00			
Central power and heating plant,	70,000 00			
Purchase of Collins Farm,	4,250 00			
[Resolves, chapter 133.]				
Total,	\$87,250 00	\$237,750 00	\$454,625 00	\$692,375 00
Boston Hospital: —				
Constructing and furnishing reception building, to accommodate 48 male patients,	\$52,000 00			
Constructing 2 cottages in men's industrial group, to accommodate 52 patients,	32,000 00			
Constructing one cottage for farm patients, to accommodate 52 patients,	31,000 00			
Constructing dining room to serve industrial and farm groups,	18,000 00			
Extending present boiler house at East Group and installing conduit and piping to make this serve the entire institution,	150,000 00			
Extension of sewer and water systems to proposed new buildings,	10,000 00			
[Resolves, chapter 133.]				
Total,	\$293,000 00	\$1,442,000 00	-	\$1,442,000 00
For land taken by eminent domain for Boston Hospital (expended under direction of Board of Insanity),	\$150,000 00	\$400,000 00 ¹	-	\$400,000 00 ¹
Worcester Asylum (see also below): —				
Constructing and furnishing kitchen and dining room building at Colony No. 2,	\$23,000 00			
Repair of old house at Colony No. 2,	3,300 00			
One new boiler, 150 horse power,	2,000 00			
Filter bed enlargement,	25,000 00			
Water supply and development of reservoir,	16,000 00			
One motor generator,	5,900 00			
Constructing and furnishing home for 60 male nurses,	49,000 00			
On account of removal: —				
Constructing and furnishing home for 44 female nurses,	36,300 00			
Constructing and furnishing service building, central kitchen and dormitory at Colony No. 4,	48,000 00			
[Resolves, chapter 133.]				
Total,	\$208,500 00	\$464,600 00	\$517,900 00	\$982,500 00
Medfield Asylum,	-	\$72,727 00	\$558,700 00	\$631,427 00
Gardner Colony: —				
Constructing and furnishing one cottage for 30 patients,	\$12,000 00	\$87,550 00	\$495,950 00	\$583,500 00
[Resolves, chapter 133.]				
Monson Hospital: —				
Constructing and furnishing a building for 130 insane male patients,	\$130,000 00	\$291,740 00	\$431,800 00	\$723,540 00
[Resolves, chapter 133.]				

¹ Expended under direction of the Board of Insanity for land taken by eminent domain for Boston Hospital.

Detailed Statement — Concluded.

	1913.	Five Years, ending 1913.	Ten Years, ending 1908.	Fifteen Years, ending 1913.
School for the Feeble-minded at Waltham,	—	\$61,500 00	\$537,100 00	\$598,600 00
Wrentham School: —				
Constructing and furnishing custodial building, to accommodate 135 patients,	\$72,000 00			
Constructing and furnishing 2 dormitories, to accommodate 210 patients,	100,000 00			
Constructing and furnishing 3 homes for 66 nurses and employees,	43,500 00			
Constructing administration building,	22,000 00			
Additions to power house, including additional boilers and distributing mains,	28,000 00			
Additions to service building,	25,000 00			
Laundry equipment,	2,000 00			
[Resolves, chapter 133.]				
Total,	\$292,500 00	\$568,300 00	\$247,800 00	\$816,100 00
Bridgewater Hospital,	—	\$90,000 00	\$235,000 00	\$325,000 00
State Infirmary,	—	—	\$120,000 00	\$120,000 00
Foxborough Hospital,	—	\$5,000 00	\$173,150 00	\$178,150 00
Purchase of the Boston Insane Hospital, .	—	\$1,000,000 00	—	\$1,000,000 00
For removal of Worcester Asylum to Grafton Colony,	—	\$400,000 00	—	\$400,000 00

Summary of Special Appropriations.

Insane: —				
Constructing, furnishing and equipping buildings for patients and nurses,	\$350,300 00	\$1,728,527 00	\$2,207,525 00	\$3,936,052 00 ¹
Number of patients provided for, .	312	1,974	2,992	4,966
Average per capita cost, .	\$823 71	\$736 78	\$596 27	\$652 12
Number of nurses provided for, .	126	365	651	1,016
Average per capita cost, .	\$740 47	\$750 99	\$650 49	\$686 60
Patients and nurses provided for, .	438	2,339	3,643	5,982
Average per capita cost, .	\$799 77	\$739 00	\$605 96	\$657 98
Land, buildings for officers and employees and for administrative purposes, including furnishing and equipment, improvements and repairs, .	\$569,525 00	\$1,581,320 00	\$1,733,886 44	\$3,315,206 44
Total,	\$919,825 00	\$3,309,847 00	\$3,941,411 44	\$7,251,258 44
Feeble-minded: —				
Constructing, furnishing and equipping buildings for patients and nurses, .	\$215,500 00	\$447,000 00	\$425,500 00	\$872,500 00
Number of patients provided for, .	345	798	840	1,638
Average per capita cost, .	\$498 55	\$471 17	\$435 12	\$452 68
Number of nurses provided for, .	66	109	82	191
Average per capita cost, .	\$659 09	\$651 37	\$731 70	\$685 86
Patients and nurses provided for, .	411	907	922	1,829
Average per capita cost, .	\$524 33	\$492 83	\$461 50	\$477 03
Land, buildings for officers and employees and for administrative purposes, including furnishing and equipment, improvements and repairs, .	\$77,000 00	\$182,800 00	\$359,400 00	\$542,200 00
Total,	\$292,500 00	\$629,800 00	\$784,900 00	\$1,414,700 00

¹ Includes \$400,000 for land taken by eminent domain for Boston Hospital (expended under the direction of the Board of Insanity).

Summary of Special Appropriations — Concluded.

	1913.	Five Years, ending 1913.	Ten Years, ending 1908.	Fifteen Years, ending 1913.
Epileptic: —				
Constructing, furnishing and equipping buildings for patients and nurses, .	—	\$87,000 00	\$152,550 00	\$239,550 00
Number of patients provided for, .	—	150	192	342
Average per capita cost, .	—	\$560 00	\$732 03	\$656 57
Number of nurses provided for, .	—	4	27	31
Average per capita cost, .	—	\$750 00	\$444 44	\$483 87
Patients and nurses provided for, .	—	154	219	373
Average per capita cost, .	—	\$564 93	\$696 57	\$642 22
Land, buildings for officers and employees and for administrative purposes, including furnishing and equipment, improvements and repairs, .	—	\$55,370 00	\$63,350 00	\$118,720 00
Total,	—	\$142,370 00	\$215,900 00	\$358,270 00
Inebriate: —				
Land, buildings for officers and employees and for administrative purposes, including furnishing and equipment, improvements and repairs, .	—	\$5,000 00	\$35,517 00	\$40,517 00
All classes: —				
Constructing, furnishing and equipping buildings for patients and nurses, .	\$565,800 00	\$2,262,527 00	\$2,785,575 00	\$5,048,102 00
Number of patients provided for, .	657	2,922	4,024	6,946
Average per capita cost, .	\$652 96	\$655 17	\$569 11	\$605 31
Number of nurses provided for, .	192	478	760	1,238
Average per capita cost, .	\$712 50	\$728 26	\$651 94	\$681 41
Patients and nurses provided for, .	849	3,400	4,784	8,184
Average per capita cost, .	\$666 43	\$665 44	\$582 27	\$616 82
Land, buildings for officers and employees and for administrative purposes, including furnishing and equipment, improvements and repairs, .	\$646,525 00	\$1,824,490 00	\$2,192,153 44	\$4,016,643 44
Total,	\$1,212,325 00	\$4,087,017 00	\$4,977,728 44	\$9,064,745 44
Average amount appropriated annually, .	—	\$817,403 00	\$497,772 84	\$604,316 36
Purchase of Boston Insane Hospital, .	—	\$1,000,000 00	—	\$1,000,000 00
Removal of Worcester Asylum to Grafton Colony,	—	\$400,000 00	—	\$400,000 00
Total,	\$1,212,325 00	\$5,487,017 00	\$4,977,728 44	\$10,464,745 44

STATE BOND TABLE.

Bonds outstanding Dec. 1, 1913, on account of institutions for the insane, feeble-minded, epileptic and inebriate, under the supervision of the State Board of Insanity, amounted to \$7,168,900, an increase during the year of \$148,000.

The annual interest charge was \$252,845.75, an increase of \$7,580.

The detail as applied to the different institutions will be found in the following tabulation: —

State Bonds outstanding Dec. 1, 1913.

INSTITUTIONS.	Period in which Bonds were issued.	LOANS.			INTEREST.	Loan Sinking Fund.
		Period in which Bonds mature.	Amount Due, 1, 1913.	Increase for the Year.	1913.	
The Insane: —						
State hospitals: —						
Worcester,	1901-1907	1931-1936	\$158,000.00	—	\$5,530.00	—
Taunton,	1901-1906	1931-1936	245,600.00	—	8,401.00	—
Northampton,	1901-1907	1931,	179,000.00	—	6,195.00	—
Danvers,	1901-1908	1931-1937	252,400.00	—	7,964.30	—
Westborough,	1901-1910	1931-1939	449,300.00	—	15,462.30	—
Boston,	1909-1911	1939-1940	1,922,000.00	\$12,000.00	67,690.00	\$420.00
Totals,	—	—	\$3,186,300.00	\$12,000.00	\$111,242.50	\$420.00
State Asylums: —						
Worcester,	1902-1913	1931-1939	\$603,000.00 ²	\$160,000.00	\$23,505.00	\$8,000.00
Medfield,	1894-1907	1924-1936	1,469,800.00	—	51,443.00	—
Gardner Colony,	1902-1910	1931-1939	462,550.00	—	16,180.25	—
Totals,	—	—	\$2,535,350.00	\$160,000.00	\$91,137.25	\$8,000.00
Totals, hospitals and asylums,	—	—	\$5,721,650.00	\$148,000.00	\$202,379.75	\$7,580.00
Miscellaneous: —						
Monson Hospital,	1895-1910	1925-1939	\$666,450.00	—	\$21,973.00	—
Foxborough Hospital,	1906-1907	1935,	130,000.00	—	5,000.00	—
School for the People-minded at Waltham,	1902-1908	1931-1937	405,000.00	—	15,150.00	—
Wrentham School,	1906-1909	1938-1938	245,800.00	—	8,343.00	—
Totals,	—	—	\$1,447,250.00	—	\$50,466.00	—
Totals, hospitals, asylums and miscellaneous,	—	—	\$7,168,900.00	\$148,000.00	\$252,345.75	\$7,580.00

¹ At option of the State Treasurer.² Includes \$200,000 issued for Grafton State Colony.

SEMIANNUAL CONFERENCES.

The twenty-ninth semiannual conference of the Board and the trustees of the different institutions was held at the State House on May 20, 1913. Dr. Michael J. O'Meara, chairman of the Board, presided. The subject for discussion was:—

TRAINING SCHOOLS FOR NURSES.

The views of the different speakers as expressed at this conference were as follows:—

Edward Cowles, M.D., Plymouth, Mass., formerly superintendent of McLean Hospital:—I wish to express my thanks for the honor of being invited to speak here of training schools for nurses. In the ten years since the ceasing of my active work in this field the system of training appears to have become widely extended in our hospitals for the insane. I am much impressed by the significance of the list of subjects for your discussion to-day. Presenting, as it does, so many different aspects of the problems and methods in the education of nurses, this list shows in itself the results of sound progress and practical experience in the recognition of the essential elements needed to make the system efficient. It is not for me to offer any comments upon what you are doing in the active work of advancing and perfecting the methods of training far beyond what had been attained ten years ago. I should rather ask you to consider the grand and hopeful outcome of to-day, and to see in it the culmination of long working forces, that could not, until now in the fulness of time, come to such fruition. In the short time allotted I should like to point to the larger lesson we now may learn, and to trace back the developing influences that have been held to their course by certain fundamental principles which must never be lost sight of, even in this great work of charity in the service of sick and suffering humanity. We can see, I think, that the forces of real progress have a time and way of their own; much long foresight must wait for the upright regular steps of progress, and there is always something to be done *first*, before we can begin to move toward the goal. We do not create nor discover the new things, we only do things when they

are there to do, — when time and circumstances make them possible.

It is just thirty years since the essential principle was being applied that brought to our hospitals for the insane the better class of young women capable of being trained for the higher service we demand to-day. In that decade, 1880 to 1890, the first four organized training schools for nursing the insane were established, — two in Massachusetts, at the McLean and Danvers hospitals, one at Concord, N. H., and one at Buffalo, N. Y. It is just forty years ago that the first three important general hospital schools were established in America; thus ten years were needed for the movement of nursing reform to pass over from the general hospitals to the asylums. It is but little over fifty years since the historic first school was founded in England.

Thus it appears that modern nursing reform became of practical effect at the beginning of the half century just passed in the decade of 1860-70; also that this was coincident with the great hospital reform that had its genesis in the American civil war. Though the initial impulse in general hospital nursing reform was given by Miss Nightingale in the Crimean war ten years before, it remained for America to start a revolution in hospital construction that extended to other countries, and to hospitals for the insane everywhere.

While this breaking away from the prevailing method of aggregating the insane in larger asylums was a gradual process, still the disposition toward the hospitalization of the asylums has dominated the whole of the fifty years which we may therefore regard as the *hospital period* of our institutions for the insane.

Now we can plainly see that it was not the change of construction alone that has created the essential reform of the general hospitals. The great progress of the medical sciences has needed the Nightingale training schools. The real making over of our asylums into hospitals has been done, in like manner, by our education of the nurses. With our new ideas of hospital construction, the first three important nursing schools were organized and brought in by *outside* associations, — a method impracticable for the asylums. It is interesting to see

how the difficulty was overcome. When Dr. Clouston, in 1876, wrote of his employment of women attendants in his infirmary wards, both for men and women, he had found that they were more interested in the bodily than in mental nursing; he lamented the unattainableness of the ideal asylum and attendants. It was a step forward, in 1878, when a new type of general hospital school was established at the Boston City Hospital. By having a medical superintendent like the Massachusetts General Hospital, the only other instance, the school was organized *within* the institution, and a method was worked out adapted to all forms of hospitals, including the asylums. The experience thus gained being carried over into the McLean Asylum, the working out of like methods was begun there in 1880. The result was attained by aiming first to give the nurse exactly the same instruction in bodily nursing, and as far as could be made possible on the practical side, as in a general hospital; she acquired the general principles and was led to realize that in nursing the insane she was nursing the sick. The crucial effect was also gained; it was proved to her that she could get from the asylum a self-supporting profession as from the Nightingale schools. She was trained to be not only a specialist nurse, useful for the asylum, but to be a general nurse who had specialized in mental diseases. She could then enlarge her training in any desired direction by graduate instruction, which has become the general practice. Thus it results that in the first decade, 1860-70, of the hospital period, a great change began in forms of construction that has brought freedom and fitness of adaptation. At the Willard Asylum for the Chronic Insane in 1869, in providing for this large and helpless class at moderate cost, Dr. Chapin "succeeded in solving this difficult problem better than has been the case elsewhere."¹

Later a great variety of forms suits every purpose, — semi-detached and widely separated buildings, colonies and farm cottages. The two decades 1870-90 brought in nursing reform, making the nursing schools for the insane four in number. In twenty years since then the asylums generally have been changed

¹ Folsom, C. F.: Disease of the Mind and Treatment of Insanity. Eighth annual report, State Board of Health of Massachusetts, 1876.

in name to hospitals, and every Massachusetts hospital has its school; and it has become a discredit that any institution for the insane, public or private, should be without its properly educated nurses.

We have been dealing with great forces in the last fifty years,—forces that gathered from the influences growing out of changes due to great wars, the progress of medical sciences and new social conditions. The working forces finally coming together offered opportunity for the newcomers in the field to do the things that have been done because they were there to do. The long-desired State Board of Insanity had to be waited for, and it was tardy legislation that permitted the beginning of the great work it has already accomplished.

Our hospital period would appear, so far as this review has gone, to have derived the inspiration of its most potent factor—the nursing reform—from the general hospitals, as though we owe to them the power, in which we now rejoice, of improving the care of our patients. But we must go farther back for the source of this inspiration. Like the hospital period, there was an asylum period of half a century, its first decade being that from 1810–20, in which the asylum idea took the definite form that became generally adopted. The asylums in this country began with the advanced ideas of humane treatment and curability. The Friends' asylum at Frankford, in 1817, followed Tuke's practice at the York Retreat. The McLean Asylum, chartered as part of the Massachusetts General Hospital in 1811, and opened in 1818, according to Dr. Folsom's historical review, "marks an important era in the history of mental disease in this country. It established the character and principles of treatment which have become universal with us." Dr. Bell wrote, in 1840, that "the application of the severe measures reported as discarded at Hanwell never was heard of in our asylums." Dr. Folsom shows that America gained the leadership in that half century, to 1860, in the development of asylum construction and humane care.

My point is this: this discussion here to-day had its inspiration in the service of the insane more than a century ago. It is agreed that Pinel and Tuke were the leaders in the ideas

of humane treatment, but it was in America that it was first generally adopted. We repeat the names of Esquirol and Jacobi and Fliedner with those of Pinel and Tuke in Europe, and we add our own leaders, Wyman, Bell, Ray and the group of "the original thirteen" of our alienists of that half century. There were others, too, in England and Scotland, notably, Hill, Connolly, Browne and later Clouston and Clark. Throughout the century these men and others of our calling were ever seeking how to get and keep good attendants. All these men knew what was wanted, and desired it long before the general hospitals knew their own need. The inspiration came out of our own work. Florence Nightingale, in 1844, went to Kaiserswerth, that part of Germany where Jacobi and Fliedner were working out the ideas of Pinel and Tuke, to learn the art of nursing the sick and the insane. She taught all of the hospitals that it was only needed to teach good women what to do and how to do it. It was then only necessary to apply the plain method which is converting our asylums into the progressive hospitals of to-day.

But have we traced back far enough, through the hospital reform and the asylum reform, to see if there was an earlier source of the great humane movement of modern times? In the next earlier half century there was John Howard's great prison reform. It is interesting to note that when the insane were rescued from prison discipline, *hospitals* were first thought of for them. It was later that the special institutions were found to be necessary, and they were called asylums. In our new American asylums, then, we had the advantage of being able to adopt the humane practices from their beginnings; in the older countries it was hard to break up the long-established abuses. The British Lunacy Commissions, now nearly seventy years in continuous existence, through their constitution and their methods, which we have adopted in Massachusetts, wrought out a great and rapid advancement in methods of care. But to-day we do not suffer in a comparison of our position with that of any other country. The closing of our half-century hospital period is now made notable by the development of the psychiatric hospital and the psychiatric clinic.

These mark the beginning of a new epoch. It is true that Europe has been in advance of us on the medical side of our work, since we held the leadership during the asylum period, in construction, humane care and in adopting the "supporting treatment." But we may claim the coming of equality in our new type of clinics which are constituted to do work of the highest order and are more comprehensive in all contributing lines of medical investigation and social service. It has been made possible for us to aim at this higher perfection by our having now the educated woman who can do for us in all of our hospitals, general and mental, what could never have been done without her. The newest fields of medical investigation and social service in which we take the keenest interest to-day need more and more the trained skill of the specially educated woman, who is proving to be responsive to every step of advancement that is made.

In the general service of the State hospitals there are practical problems which it is the object of this conference to consider. The aim is to establish a standard of instruction and requirements for all the schools, and measures to secure uniformity of efficiency and quality. Whatever you do for yourselves and your patients, it will be equally good for them if you seek also, for the sake of the nurse, to improve her professional efficiency and value to herself. Like motives inspire the physician and the nurse; interest and zeal grow by knowing how to do things, and with the pleasure of doing them well. Here lies the secret of the success of our American nursing schools.

Another conclusion comes from this brief history. The forces that have made for progress and humane care had their springs and enlargement within the institutions. It is our pride that our advancement has never been due to legislation and lunacy commissions compelling our physicians. Folsom wrote in 1876: "Humanity is now the basis of treatment everywhere, nowhere more laboriously and studiously sought for than in the best asylums of our own country." In 1870 the American Association of Superintendents prepared a project of a law which became a statute in Pennsylvania. In 1881 Massachusetts, with Folsom's guidance, enacted a similar law, which

effectively gave to the asylums the long-desired relief through commitments by the courts, and laid the foundation of the steadily growing public confidence in the institutions; a notable provision was for the admission of voluntary patients, which after thirty years has become the practice in a number of the States. This reference is pertinent here for the reason that in its being first put into thorough effect at the McLean Hospital, where the number of such admissions rose in three years to an average of about 43 per cent., now maintained for thirty years, success was determined at once by the training of the nurses to make hospital life tolerable for such patients and so persuade them to stay.

The State Board of Insanity has an important duty in the betterment of the personal service upon the patients. Established in 1898 after years of effort, as Folsom shows, of the physicians engaged in the care of the insane, it has given Massachusetts a leading place by the great work it has done. Constituted of unpaid members devoted to public interests, following the experience of the British Lunacy Commission and having only supervisory authority, it has been occupied with great tasks, in the fifteen years of its existence, in the management of the transition to State care, the development of the colony system, and the co-ordinating and uplifting of both the administrative and medical services of the institutions. All of the hospitals now having within themselves schools for training nurses, under many discouraging obstacles, the way is open for the fostering aid of the Board. There is much to be said in favor of two grades of instruction,—for nurses and for attendants. At all events there is a coming place and need of the higher order of nursing service because of the extension throughout the hospitals of methods of skilled observation and research and of intelligent service. This great advancement is clearly betokened by one year's work of the Psychopathic Hospital, one of the great achievements of the State Board. Such a hospital has been the subject of discussion and plans for securing it for many years. The Board has made one of its best contributions to the future treatment of the insane in this admirable institution, which is already becoming a source of inspiration in the work of all the hospitals in the Commonwealth.

Dr. Arthur V. Goss, superintendent of Taunton State Hospital:— I have nothing to say to-day in regard to the general problem which has been covered so very ably by Dr. Cowles. All that I shall try to do will be to state, as briefly and comprehensively as possible, the results that we have at least attempted to accomplish at Taunton along the lines suggested in the outline supplied by the committee.

The advantage of the training school has been, I think, completely covered by Dr. Cowles. In regard to the comparative merits of the elective and compulsory course of study, I have only to say that we have tried both at Taunton. The training school in Taunton State Hospital was organized in 1894, and four years later graduated its first class. We have graduated a class every year since that time. The course was elective at first, and from the first admitted to full membership both men and women. Afterward (I think before the first class graduated, or a year or two later) the attendance was made compulsory, and was continued for a matter of four or five years, when it was again made elective. It was made compulsory for women in 1910, for the reason that we felt the absolute necessity, at least in our institution, of instructing to some extent every one engaged in the care of our patients, and the most practical way seemed to be to instruct them in our school. All women have been so instructed since that time.

In 1911, one year later, the course of study was made compulsory for men for the same reason, and we have never had occasion to regret making the course compulsory, either for men or for women.

We have found the compulsory course with us to be beneficial in many ways. It is an excellent way of enabling us to decide on the merits of our candidates for permanent employment as pupil nurses, and we have also found that it discouraged and kept away a certain class that we did not want.

We have not, since the adoption of compulsory education in the school for both men and women, found it any more difficult to keep our ranks filled than we did before, and on the whole the material has been more satisfactory.

In regard to the character and previous education of the applicants, I would say that we endeavor to get as much in-

formation in regard to our applicants as possible before engaging them as probationers. To all requests for employment we send out a form, together with a little booklet, in regard to the training school. The form states certain things that are considered desirable, certain qualities desirable for the nurse to possess, and certain questions asking for information in regard to the applicant. After the application has been filled out properly and returned to us we send to the references (and to any other source from which we think we may obtain information) a question blank asking for information. Unless we receive replies which we consider satisfactory we do not engage the applicant. Sometimes an applicant applies in person and gives a pretty straight account of himself, and if he makes a good general impression, in occasional instances we engage him after he has filled out an application paper in writing. His retention in the service is then dependent on satisfactory replies from the persons to whom he has referred. We do that only in very few cases, however.

As soon as the probationer takes up work he is supplied with a set of the by-laws that have been in use for a great many years (more than twenty years, to my personal knowledge), having been revised and added to from time to time.

In regard to the character of our pupil nurses, I can only say that of both men and women, the character, on an average, has improved to a considerable extent as the immediate result of the influence of the school, and I think I can also see a difference in the three years that it has been compulsory for both men and women.

I have compiled a few statistics here in regard to the previous education, which has been alluded to, of our nurses at present. In our employ at the present time we have 15 graduate nurses, — 10 women and 5 men. In the senior class we have 18, — 9 men and 9 women; in the intermediate class, 38, — 27 women and 11 men; in the junior class, 63, — 33 women and 30 men; and 20 probationers, — 12 women and 8 men, making a total in training of 139. Of those in the school at the present time, of the 9 senior men, 5 had one year or more in high school and the remaining 4 had common school education; in

the intermediate class of 11 men, 8 had one year or more in high school and 3 had common school education; in the junior class of 30 men, 12 had at least one year in high school, 5 were grammar school graduates, and the rest had common school education; of the 8 men probationers, 4 had one year in high school and the other 4 had common school education.

Of the women seniors, 4 had at least one year in high school and 5 had grammar school education; in the intermediate class, 10 had at least one year in high school, 9 were grammar school graduates and the remaining 8 had only common school education; of the juniors, 10 had one year or more in high school, 14 were grammar school graduates and the remaining 9 were educated in the common schools.

The average in regard to education has increased decidedly since the organization of the school.

In regard to the size and growth of classes: we graduated the first class, as I mentioned, in 1898, and have graduated a class every year since. In only one year were there no men graduates, although the course was not compulsory for men until two years ago. The average size of classes has been about 10 up to June, 1912. Last year's graduating class numbered 17, — 12 women and 5 men. This year we expect to graduate 16, — 8 women and 8 men. The earlier classes were small. The class of 1898 was 8 in number; the class of 1899 only 5; in 1900, 7; in 1901, 6. Since 1901 the graduating classes have averaged larger, being seldom less than 8 in number.

In regard to the practicability of instruction for male nurses. I personally fail to see why it is not as practicable for men as for women, if it is practicable to educate men, and I think we all agree to that. Our general hospitals, as well as hospitals for the insane, find it necessary to employ men as nurses, and it is a question whether you employ men without educating them, or whether you educate them. Most of the general hospitals with which I am acquainted (and I have had some acquaintance with general hospitals), all of them, in fact, employ men more or less as nurses. In the hospitals with which I have had the most intimate acquaintance they practically receive no instruction whatever. If the orderly was a pretty

good fellow, a favorite, he got some instruction that was of value; if he was not, he did not get very much instruction and did not hold his place very long. I can testify, from my experience, that male nurses in general hospitals are intrusted with duties that women nurses are not permitted to do until they have been instructed. I am a firm believer in the education of the male nurse. We have got to have some male nurses, not as many as women, and the only way that we can have them adequately educated and fitted for the work is to educate them.

In regard to co-operation with training schools in general hospitals, I am heartily in favor of that. I believe it is practicable for all of our training schools to form an affiliation with some of the general hospitals, whereby at least their women nurses may receive supplementary training. Since 1911 the Taunton Hospital has been affiliated with the Boston City Hospital, and all of our women, either seniors or recent graduates, receive six months' experience and instruction in the Boston City Hospital. After the present class none of our women nurses will receive their diplomas from us until they bring back a certificate from the Boston City Hospital of satisfactory work and standing for the period of their service. It has not been required up to the present time, owing to the fact that those who entered the school previous to the arrangement being made entered with a different understanding. It applies, however, to all now, and we have found it very beneficial to our nurses. I will say, moreover, that we are negotiating at the present time to get a similar privilege in a neighboring State for our men, but that is still in process of negotiation, and nothing, practically, has been accomplished as yet.

In regard to "the number of nurses appointed to higher positions," I do not know exactly how that was intended to be covered, but presume that the committee desired to know what proportion of graduates of the different training schools had been promoted to higher positions. Of the 148 graduates of the Taunton Training School, 30 have held, for longer or shorter periods, or are holding now, the positions of head nurse or supervisor in the hospital. Two graduates are registered

physicians at the present time, one in general practice and one occupying the position of assistant superintendent in one of our State hospitals. One graduate is a practicing dentist; two men are doing private nursing; two are managers of charitable institutions; three women are superintendents of training schools; two are assistant superintendents of training schools; four have been employed as head nurses in private sanitariums; two have passed the army Board and are now nursing in the army. Four, one man and three women, are occupying charge nurse positions in New York City hospitals, and we have nine graduates in our institution at the present time who are occupying the positions of supervisor or head nurse.

“How can the course of instruction be improved?” I think I shall have to leave that for others to answer. I can only say that we are trying to improve ours all the time. The latest addition that we made was about a year ago, when industrial instruction was made a part of our training school work, so that our nurses at the present time are trained in industrial work and are thereby better fitted to perform their duties in general, being better able to instruct patients. During the year we have had 24 men and 34 women who have received instruction in these industrial classes. The instruction during the past year has covered basketry, brass and copper work, woodwork, — *i.e.*, wood burning, — paper work, bead work and lace making. Lace making, however, was not taught in the school. We have felt that the industrial instruction was properly a part of the training school instruction, and feel that it has been of some benefit to us, and we look for greater benefit in the future.

Dr. Thompson:—At this season of the year most hospitals have difficulty in getting a full quota of male nurses. What influence has the class in the training school upon that in your hospital?

Dr. Goss:—None, because the training school closes in June, and the classes do not resume textbook work until September.

Dr. Thompson:—Do you feel the shortage at this season of the year as much as the other hospitals, so far as you know?

Dr. Goss:—I believe we do. I know that for over twenty

years it has been a constant fight and struggle to get enough men and women during the summer to do the work properly, and we still have that trouble, but I do not think we have it any more than for the last four years.

Dr. Thompson:— Do you think the time to graduate occurring in the fall, rather than in the spring, would make any difference?

Dr. Goss:— I have not given that any thought. Personally, I do not think it would make any difference. The advanced classes I think would stay anyway; we do not have as much trouble with the advanced classes. It is the first-year pupils and probationers, as a rule, whose places we are filling all the time, and not those in the advanced classes, except after graduation, when some of them leave to take up other work.

Dr. Thompson:— In regard to your affiliation with the City Hospital. When they are working there, how do you arrange? They are taken off the pay roll, but how are their expenses paid in going back and forth?

Dr. Goss:— When they are at the Boston City Hospital they have simply the pay that the Boston City Hospital gives, and during the six months they are away on leave of absence for the purpose of taking the course in Boston they receive no pay from the Taunton hospital.

Dr. O'Meara:— I would like to ask if it would be expedient or advantageous to establish co-operation between your training school and the Isolation Hospital. I know the Isolation Hospital at Worcester would be glad to have nurses from the State hospitals and give them the advantage of training in the care of such diseases as scarlet fever and diphtheria. Would it be practicable for you to co-operate with them?

Dr. Goss:— It would not be practicable for us at the present time, for the reason that our nurses get that same training in the Boston City Hospital, South Department. I think it would be practicable for any institution whose pupils do not have such opportunity. Our nurses, as a rule, are not compelled to do that work at the City Hospital, although all of them have elected to do so.

Dr. O'Meara:— You would not regard it as a wise thing to

institute it as a part of the training course, and force it on your nurses, regardless of their wishes in the matter?

Dr. Goss:—I think that nurses ought to learn everything about their profession that they are likely to come in contact with. I should not hesitate, personally, to require that at the City Hospital. When our nurses go there we simply pass them over to that institution for such instruction and experience as they see fit to give them. They give all of them the option of the South Department, and every one has elected it. That being the case, it does not seem that it would be any hardship if it were compulsory. I should not regard it so.

Miss Sara E. Parsons, superintendent of nurses, Massachusetts General Hospital:—I feel that I should offer an excuse, perhaps, for speaking before this body of people who are so much more familiar with the State hospital problems than I am. But fourteen years of my nursing life have been devoted to the care of mental and nervous cases, and I regard these problems as the most important ones we have in nursing.

The lessons I learned at McLean Hospital are some of the most valuable ones I have ever had, and I am very glad that general hospital nurses, as a rule, are becoming very much more interested in the nursing of mental cases. It seems at last as if really the time had come when it is going to be possible for satisfactory affiliation between the mental and general hospitals.

I do believe in the training schools. I do not think they are economical factors, particularly, because I know that considerable money and a great deal of time must be spent in any hospital where there is to be a good training school. If we aspire to get well-educated young women and young men into the work, we must offer them something that is really worth while. I believe that if we do offer them something really worth while we shall attract them. Perhaps the best proof of that may be in my recent experience with the graduates at McLean Hospital. It is not compulsory that the graduates of McLean Hospital shall come to the Massachusetts General Hospital for post-graduate work, but a great many of them have always elected to do so, and it has been their privilege. Formerly we gave thirteen months' postgraduate course to the McLean nurses,

which included experience in medical and surgical work. They had to acquire their obstetrics later on, if at all.

It seemed to me it would be only fair to those young women who had already spent two and one-half years at McLean, and thirteen months at the Massachusetts General, to find for them obstetrical experience while they were taking general training, so, through the kind co-operation of the Wesson Memorial Hospital in Springfield, I was able to make an affiliation which would provide for the McLean postgraduates, as well as for our own pupil nurses, and we offered them an eighteen months' complete course, feeling that that was not too long a time to spend if they were to get experience in general medical, surgical, operating-room and obstetrical work. Where we had perhaps 13 or 14 McLean postgraduates with us before that arrangement was made, we now have 26 or 27. I think Dr. Tuttle will bear me out in saying that most of the nurses seek this opportunity. They are valuable to us, too, and I know from my own experience in both kinds of hospitals that nurses may be trained in any hospital where there are sick patients to be cared for, so that they are valuable to the hospital with which they may become affiliated. The elementary methods may be learned anywhere in any hospital if proper teachers are provided. There is no reason why as good a preliminary course cannot be given in a mental hospital as in a general hospital. A classroom can be provided with the teaching material, the instructors can be provided, and in that classroom, practicing on each other or with dummy patients, they may learn almost everything that the nurse needs to know as to the technic of most nursing procedures, and they can then go into the wards and apply that knowledge.

I think in establishing training schools for hospitals for the insane it is very desirable to emphasize the special features that are peculiar to that training; that will make the young women and young men particularly desirable after they have finished their training. These features are, of course, the work with mental cases, hydrotherapy, invalid occupation and the social side of it that makes the nurse more valuable in her care of convalescents. There is no reason why she should not have as good instruction in *materia medica* and dietetics, anatomy,

physiology, bacteriology, etc., as any nurse would get anywhere, if the money and time are spent for that instruction.

I do think we could make very much more satisfactory affiliations, if, having established this relation, we correlate instruction somewhat better. For instance, if a nurse, in coming to me after having been trained in a State hospital, wanted me to make some allowance for her time, if I could find that she had theoretical instruction in the first year that would compare with what we give in our hospital, including the preliminary course and other lectures given, so that she could pass the first year's examination, I should feel that she might be allowed that year, and if she had had further instruction, perhaps I should feel that she might be allowed more time. The difficulty usually is, when these people apply to us, that their instruction in their own hospital does not coincide with that we give, and we could not allow a great deal of time without sacrificing something that is really essential if they are going to be graduated and able to register.

The training of men nurses is a subject that I am very deeply interested in. I feel that we need very many more well-trained men than we have, and that better men could be brought into the work if the work were dignified and made worthy of a well-educated young man, and if he had more social and professional recognition. I feel that women nurses are taking care of a great many cases that men nurses should take care of. The clean, honorable, well-educated young men who go into the work are in very great demand; there are not enough of them to fill the hospital positions, or enough to go around in private practice. I do believe that every effort should be made to raise the educational standard before the nurse comes into the school, because it saves so much time in elementary instruction. I know a good many schools that have made a very particular effort to raise the standard, and were willing to sacrifice something financially in the beginning while they were establishing it, and have profited very much by making their standards higher. The more highly educated people will not go where the majority of people have an inferior education and where the curriculum has to be based on too elementary a preparation.

I know, when so many applications come to the Massachu-

sets General Hospital for nurses to fill positions in the private and public State hospitals for the insane, that they have exhausted the resources of the special hospitals before coming to us, and I am quite sure that the supply of trained and capable nurses in mental work is not yet nearly, or anywhere nearly, equal to the demand.

Everett Flood, M.D., superintendent, Monson State Hospital; not present in person; letter read by Dr. Thompson:—

“ Our training school was one of the first that was regularly established, and to my mind has been as successful with the women as we could reasonably expect it to be. We have made the course now to extend over three years, and it is practically compulsory. There are certain cases, however, in which we could not enforce the regulation. For example, some women nurses have been too old to undertake the training school work; they positively could not do it, and yet were faithful and competent nurses. In other instances nurses have been on night duty and have not been able to take the regular course, though they have all had the preliminary course and all the public lectures, but were not in line for graduation.

“ With the men, we give a preliminary course of instruction so that all attendants are taught in matters pertaining to the regulation of the hospital and in necessary elementary points relating to the care of patients. I consider this very useful, and, so far as the men’s course goes, about all we can expect. It gives personal touch between the attendants and the superintendent or the assistant superintendent, and sometimes leads to the correction of misunderstanding. I have attended to these matters personally as much as possible, and have seen that every new attendant is brought in at a regular time for instruction. If for any reason the training school should be given up, I shall certainly retain this part of instruction for every nurse and attendant. As a matter of fact, however, I see no indication that the general training school for the women nurses is not in as flourishing and hopeful a condition as it ever has been. We have averaged five graduates each year. The most of these have left our employment within a year or so after graduation, and have taken up private nursing in Springfield or other cities.

with great success. Whenever we have had a case here requiring the attention of one or more trained nurses we have called in some of our own graduates and put them in charge of these special cases. They have been loyal and intelligent, and have done the best possible work for us. The few trained graduates who have remained with us have taken positions as supervisors, assistant supervisors, matron, masseuse, instructor in arts and crafts, and at the heads of departments where their experience in this particular hospital and their general training have been of great advantage both to them and to us. In the instruction given we have been able to let nurses go out for the doctors in this vicinity. Whenever they go on cases in this way they are taken off our pay roll and they are paid by their employer. A nurse thus goes sometimes for a day or two and sometimes for several weeks, and they have all had a certain amount of this general nursing, surgical and obstetrical training, with the doctors in the community. This has been an advantage to them, and has been a great accommodation to our neighbors. It seems to me a very valuable feature of the work."

Dr. Ernest V. Scribner, superintendent, Worcester State Hospital:—We have at present in our training school 114 pupils, and of these, 10 are in the graduating class.

The work of our training school has been made compulsory for women, but not for men, although there have been few years when there have not been one or more men in the class. I should believe in making the course compulsory for men if I thought that we could enforce this requirement and maintain our numbers. The experience of Dr. Goss seems to indicate that you can do that, and I am favorably disposed toward trying it. There is no question but what the inauguration of the training school for nurses has caused a distinct improvement in the character of the service, and that a better class of persons has been attracted, and that they stay longer. The fact of an impending graduation has a very great restraining influence on the disposition, which some people have, to go about from place to place. They wish to stay and get their diplomas because it means something to them.

With reference to the opportunities which are open to grad-

uates of our hospital training schools, I think that we have a field, which, at least in my own institution, has not been cultivated as much as I intend that it shall be in the future. I refer to the placing of female graduate nurses in charge of male wards. I feel that a greater number of women should be employed on male wards. We have made a beginning at the Worcester Hospital, and propose to increase the number.

With reference to the career of the nurse and her success in life, that depends quite as much upon the character of the individual as it does upon the instruction given. We all know that in any course of instruction, whether it is in the training school with us, or whether it is in college, there are many people who are able in some way to fulfill the requirements and perhaps graduate with some degree of honor, but who are unable to do well afterwards. At the Worcester Hospital we try to retain in our service all those people who we think are worth retaining.

We are giving greater attention to dietetics than formerly. Our matron is giving a course of instruction on this subject.

I believe, also, that we can well inspire a greater interest in instruction in social service work. This, I believe, is a very important part of our hospital duties. At present, the different members of the medical staff are doing work of that character, but I think that the nurses also could well be instructed, so that after graduation, or even during the course, they could be employed along these lines.

Dr. O'Meara: — Are all your female attendants in the training school?

Dr. Scribner: — Yes.

Dr. O'Meara: — Are they all up in the standards of education to the level that you desire to have them, to make them competent to fit as nurses?

Dr. Scribner: — I do not think they are up to the level that we would desire, but the female nurses are selected by our superintendent of nurses, who is present here to-day and perhaps can answer that. An effort is made with both the men and women to find out as much as possible of the preliminary character, moral character and educational fitness of the people for the positions.

Dr. O'Meara:— Is not the first problem, usually, with applicants for places in your institution to make a living rather than a desire to fit as nurses?

Dr. Scribner:— I think that varies with the individuals. I should say that in a majority of cases what you state is true,— they come for the purpose of making a living. Many of them who come there have their interest aroused in the work, and they continue because of real love for the work and a real desire to make that their permanent vocation.

Dr. O'Meara:— Are there not some who, whether or not they eventually become fit, enter the service as time servers? You have the problem of looking out for these. They apply for work and then they discover that in order to get work they have to accept the training. I should like to know whether, under those circumstances, you are making competent nurses.

Dr. Scribner:— I think in some cases we are making competent nurses of them, and in other cases we are not. I cannot state the percentage. I think many people who come are "time servers," who are seeking a living, but many of them do develop a great interest and do take up the work because they love it and have a genuine interest in it.

Dr. John H. Nichols, superintendent, State Infirmary:— I was not expecting to say anything special at this time. I will just state that our training school for nurses has been practically in existence since 1890, when lectures were given, especially to those in the general hospital wards. Since somewhere about 1892 or 1893 these lectures and special instruction were extended to those in the asylum wards of our institution, and since that time the number of nurses who have taken the training school course has constantly increased until, perhaps during the last eight or ten years, it has been pretty universal, but not compulsory. There are, however, always some at the institution who are there as relief nurses who are not in the regular training-school classes.

For a good many years we have encouraged the men to attend the lectures, and many of them have taken advantage of this opportunity. I find, however, that it has been particularly difficult to retain the services of the male attendants long enough

for them to complete a full course. Our training school course covers three years. The men come there mostly to earn a living, and I think that, as a matter of fact, they are not paid enough to make them care to stay for a long while with us. It would seem to me that if we wish to improve the service in that part of our nursing force it will be necessary for us, in the future, to be able to pay the men a larger wage than at the present time. In our training school, of course, the majority of the work is in the general wards. Two years of the training school work is in the general hospital wards, and as we have all the different varieties of work,—medical, surgical and obstetrical,—of course it is not necessary for us to co-operate with other institutions.

Dr. Thompson:—I would like to ask Dr. Nichols what he would say about co-operation with the other State hospitals, since he has a general hospital,—with, for instance, Medfield, Gardner or some institution not having a general hospital. Might they not co-operate with you?

Dr. Nichols:—I am not prepared to answer that just at present, but at first thought I should feel that there might be some difficulty. For instance, with our own nurses in the training school it is sometimes difficult, because of the variety and large number of different departments in which they have to serve, to find the time to arrange for their work in all of our different departments in the general hospital wards. I should think there might be some difficulty in taking many nurses from other institutions. It would seem to me that possibly it would crowd or shorten up the time of service of many in our own school, either in the department for tuberculosis or obstetrical department, or the men's or women's hospital.

Dr. Henry P. Frost, superintendent, Boston State Hospital:—I was greatly pleased to find this subject on the program for discussion to-day, because it happens that we have been discussing among ourselves certain difficulties which are presented in connection with the training of nurses, and were seeking, at discussion among ourselves, to find the best solution.

I am going to speak very briefly on just certain aspects of this subject, and perhaps, for the sake of starting an argument which

will be helpful, I will take a stand on a proposition which might be dissented from. I hope it will be.

The subject chosen for discussion to-day is one of much importance to us all. It is not a question of whether a training school is desirable for it was decided long since in all of our hospitals that it is not only desirable but essential. We have our training schools; we could not do our work without them. We are going to continue them, and, if we can, improve them. There are, however, several points well worth serious consideration. Some of these will be discussed by others. I wish to speak particularly of two, one of which is on the program, the other not mentioned there.

First, the course of study,—should it be elective or compulsory? I would prefer the term "course of instruction," emphasizing the importance of teaching, demonstration and practice above the requirement to study; for the efficiency of the school depends upon what is taught in it, and is not measured by the theoretical knowledge which the pupils who elect to study may acquire.

I believe that attendance upon a course of instruction should be required of every one engaged to care for patients, but, considering the size of our institutions, the great variety of conditions calling for different kinds of treatment, care and management, the varied activities of so many kinds of patients to be supervised and directed, it does not seem to be essential or even reasonable to insist upon the same kind and the same extent of training for all. Proper classification of our patients is a prime requisite for their satisfactory care and treatment. Acute mental disease and states of bodily illness or disability demand nursing service of the highest grade. States of mental weakness and chronic conditions without accompanying physical disease do not require this service, but merely attendance under careful and skilled supervision.

The medical profession and the public appreciate to the fullest extent the value of the well-trained hospital nurse, and there is a large and increasing demand for her services in the community, but neither the doctors nor the public will indorse the suggestion which in some quarters is becoming a demand,—

that only nurses with a certain specified training obtained in designated hospitals shall be allowed to follow the profession of nursing. They do not agree to this proposition because it is recognized that there are many cases which do not require, and besides are absolutely unable to pay for, such high-grade service. To be sure, the highly trained nurse would admirably fulfill all the requirements of even the simplest case, but being an expensive product she is not economically appropriate.

Now in our hospitals the same thing is true. It costs a great deal to turn out well-trained nurses. The cost is not a tangible item, — the minor part of it is the direct outlay; a considerable part, the tax upon the teaching staff, which is also the medical and administrative staff; and the major part is paid by the patients who suffer the evils of shortage of nurses in the wards because of the requirements of the training school. Routine is interfered with; exercise, recreation, occupation and the individual attention to patients are restricted in order that the training school schedule may be carried out. I am speaking frankly of the way it works out in our hospital, where the effort is made to serve the women's wards with none except graduate and pupil nurses, and this notwithstanding that our ratio of nurses to patients is unusually high (1 to 6.8).

A general hospital training school is conducted for the purpose of educating nurses to serve the community. Incidentally, the hospital patients are cared for in the process of training the nurses, and, since the pupil nurses serve practically without pay, it is possible to have plenty of them without incurring a prohibitive expense.

With us the situation, it seems to me, is different, and yet we are following the general hospital method with the important difference that in order to get our pupils we have to pay them two or three times as much as the general hospital pays its nurses in training. What it practically amounts to is that we compete with the general hospital training schools in their field, and we do it under a severe handicap. Our nurses after graduating go away to earn their living in a profession which they have acquired at no expense whatever, and if they are so minded they leave with a bank account acquired in the process, while we go on and grind out another class.

I believe we would do well to withdraw from this unequal and relatively unprofitable contest and set ourselves to build up a training school system to serve our own needs, — the needs of our patients. Why should we not frankly avow that our training schools are for the purpose of training nurses for our own work, and seek to inspire our graduates with the purpose to remain in the hospital service, promising and giving them promotion and such compensation as will retain them? The result of such a policy should be the gradually filling of the service with graduate nurses free to give their whole time to their duties in connection with the patients; and, to keep this corps recruited, there would be needed only a small class of pupil nurses who might in these circumstances be practically supernumeraries. If, as a part of this policy, we are willing, as I personally am, to accept for the care of certain groups of patients a class of less highly trained caretakers, we will succeed — viewing it optimistically — in getting our actual needs served, and will be saved a good share of the present toil and trouble, — that part of it which in the end does not reward our effort.

I approve and practice giving a few selected male attendants the full training school course with the women rather than attempting to put them all in the school, for most of them will not stay long enough to make it worth while.

I also approve and practice putting women nurses in the men's wards for all cases needing actual nursing, which makes it unnecessary to carry the heavy load of attempting to thoroughly train as nurses a large number of men.

For the instruction and training of attendants as distinguished from nurses I have adopted a schedule of lectures and demonstrations which is in use in the New York State hospitals. The course extends over thirteen weeks, and is preferably conducted continuously, a new attendant joining as soon as he goes on duty and dropping out when he has satisfactorily completed the round. It serves admirably the purpose of a probationer's course for such as are stimulated by it to later join the regular school.

The second point which I had in mind and which I merely wish to present for discussion is, whether we might not with advantage permit a pupil nurse who has taken her first year of

training in one of the State hospital schools to be accepted as a member of the second year's class in any one of the other schools in our group; not that this should be practiced too freely, but that through mutual understanding among the training school superintendents this privilege might be granted in worthy cases.

Dr. George T. Tuttle, superintendent, McLean Hospital:— It is a matter perhaps of historical interest, and of fundamental importance, that Dr. Cowles did something for general hospital training schools before he began his work with those for the insane.

You will remember that the first schools were established by private individuals and financed by private benevolence, and were managed outside of the hospital. It no doubt was necessary to start the movement in this way, but when Dr. Cowles went to the Boston City Hospital — a public municipal hospital — there were no benevolent ladies with large bank accounts who wanted to finance a training school for him. So far as I have observed, there is no financial profit in the business of education. Every college and every professional school, so far as I have observed, is hard up and begging for money, so the Doctor persuaded his trustees to start their own training school, and, I think, this was the first time that hospitals entered the educational field. It was an epoch-making movement. Just as soon as it was demonstrated that it could be done in this way, all hospitals established their own schools, and learned, as Miss Parsons says, that it was not a matter of economy; it costs money to run training schools.

I do not agree with Dr. Frost, if I understand correctly that he advocated teaching nurses in hospitals for the insane only what is needed to take care of insane people. Here again Dr. Cowles was a pioneer. Many efforts had been made for giving individual instruction to nurses and even in classes, but these were one-men schools, and died a natural death when the one man lost his interest. They taught simply the care of cases of mental disease. Dr. Cowles took a broader view: if the school was to be a success, nurses in the hospitals for the insane must be taught so that they could hold their own with any nurses, and he undertook to teach general nursing as well as nursing of the insane. Of course, a hospital for the insane is somewhat

handicapped by lack of cases for instruction in medical and surgical nursing, but it is easy, by the expenditure of a little more money, to get a woman who knows the technique of general nursing, fit up a room, purchase a manikin, and let that person instruct all the nurses in the technique of general nursing, so that they will learn this before they go on the wards.

People want nurses for acceptable personal service, and do not care so much about a liberal education, although it is desirable.

I want to say a word about the male nurse. I think this is the burning question nowadays. What are we going to do with the men in our hospitals for the insane? I sent out a circular letter a few years ago and received answers from something like 150 hospitals. I was surprised to learn that one-third of them got what they called "satisfactory" men. These answers did not come from Massachusetts. I do not think there is a hospital superintendent in Massachusetts who can say that he gets satisfactory men, but rather that he has to take what he can get.

I would have the instruction of the men nurses compulsory, as it is for the women in most hospitals. If one cannot get high school graduates, get what he can and instruct them. The trouble is that thus far nursing has not been a satisfactory career for men. Women after graduation are in demand and receive good compensation for their services. There is not that demand for the male nurse, perhaps partly because a satisfactory and not too expensive supply has not been available; but there is some demand for the male nurse, and as Dr. Goss said we must employ them in our hospitals and we should try to instruct every one of them. If nursing was a career for men, and was so understood, they would compete for places in the hospitals to obtain a course of instruction in the training schools. The man now comes usually because he wants a job; he worries along with the school work, and if he succeeds in getting about half way through the course of study he begins to have a little ambition and wants to finish. The best graduates, so far as my own observation goes, have little difficulty in obtaining employment with satisfactory compensation.

It seems to me, then, that we should give instruction to our

men nurses and make it compulsory; that we should pay them more, enough so that they can save something; that those graduates whom we wish to keep in the service should be given an opportunity to marry; and that the hospital should furnish a house or apartments for them so that they can live like other people. Other countries have done more in the way of furnishing accommodations for male nurses than we have. In Scotland, in one of the district asylums, there are thirty-five cottages for married men nurses, and this particular hospital is said to have solved the problem of keeping good men in the service.

Dr. Walter E. Fernald, superintendent, Massachusetts School for Feeble-minded: — I think, Mr. Chairman, I have very little to contribute. I must confess that Dr. Frost's position appeals to me very strongly, — that in our training schools we are training our nurses to a point where they are no longer eligible for the very work we have to do. I say this with a full realization of the importance of the other position, but I believe that our training schools have done very little so far to assist in the solution of the problem of keeping our own hospitals equipped with first-class people who will satisfy the friends of our patients.

Dr. Elmer E. Southard, director, Psychopathic Department, Boston State Hospital: — I would like to say a few words upon this topic from a different angle. I have recently analyzed a series of autopsies performed at the Boston City Hospital during my stay there (1901-05), autopsies which I personally saw. Some 8 per cent. of these cases were mental, and a good fraction of the 8 per cent. were cases of delirium, chiefly delirium tremens. The treatment of delirium, and particularly delirium tremens, is in a sad plight in general hospitals, I think.

I think we need more co-operation, rather than less, in the training of nurses in general and in insane hospitals. I feel that the nurses in general hospitals do not get, either from the nursing side of the institution or from the medical side, a proper modern training in the treatment of delirium and excited states. I believe that recent progress in psychiatry indicates that we are drawing together psychiatry and general medicine; that any endeavor made to support nurses' training schools without opportunities for training in both fields will be found to be running contrary to the general progress.

Recently I have been very much impressed with the low mortality of such cases as came by mistake to the Psychopathic Hospital, but proved to be cases of delirium tremens. One of the assistant physicians, Dr. Donald Gregg, has investigated the mortality of delirium cases in various well-known institutions along the Atlantic coast, whose names you well know. He found an exceedingly high rate of mortality in these general hospitals. There is no law which forbids restraint in the general hospitals, where restraint is practiced and has been practiced more, I should say, than in the hospitals for the insane. I am even told by experienced persons that the jails have a better record, from the standpoint of mortality in delirium cases, than have some of the best general hospitals; for the patients are not restrained in these jails, and acute dilatation of the heart does not ensue.

It is important to get this point into the minds of practitioners, of medical superintendents and of superintendents of nurses. It means, I think, that we must co-operate with general hospitals; it means that nurses who propose to go into general nursing practice should amplify their training in some well-managed insane hospital, where modern methods of non-restraint, and particularly of hydrotherapy, are in vogue. Certainly the statistics of such well-managed insane hospitals will demonstrate a lower mortality in severe cases of excitement and delirium than will the majority of general hospitals.

Dr. George M. Kline, superintendent, Danvers State Hospital: — I would like to ask Miss Parsons why, if it is desirable to have affiliation between the State hospitals for the insane and general hospitals, it would not be a good thing for the general hospital nurses to take the training, say for six months, in the hospitals for the insane, the same as the State hospital nurses do in the general hospitals.

Miss Parsons: — I think, Dr. Kline, it is very desirable, but it has got to be a process of education, and not only a process of educating the nurses so that they will want to go, but so that their parents shall be willing to have them go. We must make our training schools, whether in insane hospitals or general hospitals, places in which we are willing our sisters and our daughters should get an education. I do not think all our training schools in any class of hospitals have solved the prob-

lem altogether satisfactorily in that way, and until we do we have got to work at it and have got to work hard.

Anybody who has done the actual nursing of mental cases, who has stayed in the wards through the long days or through the long nights, and has struggled with patients, and has heard the language that a great many of the patients use, has to have a very great motive for continuing in the work. The only thing that kept me at it was something which Dr. Cowles said in one of his lectures, — that when it is so hard you think you cannot bear it, remember that your mother, your sister or yourself might be in such a condition, and keep on nursing that patient just as patiently and kindly as you would want your mother or your sister nursed ; but you know we will do ourselves sometimes what we would not be willing that our sisters should do. At the Massachusetts General now we are fortunate enough to be able to send a few of our pupils to McLean for mental training, and the interest among the nurses is quite pronounced. So far they are enjoying the work and feeling that it is worth while, and I am hoping that the fathers and mothers will feel that it is desirable.

Dr. H. Louis Stick, superintendent, Worcester State Asylum : — I do not think I have a great deal to say, but would like to express some of my thoughts on this subject. In 1898, while I was at the City Hospital in Boston, we established a training school for the male pupils. This had not been attempted before. I believe that previous to that time most of the male nurses were usually medical students or those just about to be graduated in medicine. Up to that time the nursing had been of a very high standard ; since then they do not get the medical student as they did previously. However, they are trying to raise the standard, principally among the female nurses.

I would like to express two thoughts : first, I should like to take Dr. Frost at his word with reference to co-operation of nurses and make an interchange of our nurses with the Psychopathic Department. — In Scotland, in many of their institutions, they are trying, as far as possible, to have all of their mental and nervous hospital nurses general hospital graduates. At Larbord, which is not very far distant from Edinburgh, they

have only female general hospital graduates. All have had at least three or four years' experience before they are taken into the institution there and at Morningside as well, and they are not, as far as compensation is concerned, paid half of what we pay here in Massachusetts. The compensation, I believe, should be the last thing to be thought of. Service and work from the mental and nervous point of view, the equipment of the nurse in general, should be the first object in view. If we can get that principle introduced in our institutions, we will have less worry.

I also believe the more female nurses we can get in our male departments the better will be our work among the insane and the higher the standard in the care of the same. With the right kind of a female nurse in charge of all wards, and with a sufficient number of male nurses as a protection of those in charge, we shall have made a great step forward; our troubles in securing help will be less, we will have less changes in the service and will in this way materially raise the standard in our institutions. I believe if this can be accomplished in this State, or in other States, many problems that we have been working upon for the past twenty years or more will be solved.

Our schools for training nurses should be under more competent heads. They should be those who have the interest of the work at heart and who are always devoted, first and foremost, to the general welfare of the patient; who feel that they are the representatives of the institution, a real connection between the patient and the relatives or friends; who are willing that the general public should become better informed; and who will in time help to create a general feeling of good will.

Dr. Edward W. Taylor, member of State Board of Insanity: — I have been impressed in listening to this discussion with the great similarity between the problems of nursing and the problems of medicine in general. Apparently the nurses and the nursing training school are going through the same sort of evolutionary period that medicine in general has been going through of late. In this connection two general topics have been brought up by different speakers, — the question of co-operation and the question of specialization.

It is evident enough that the nurses must follow the doctors; that as medicine in general specializes and is sure to continue to specialize as time goes on, nurses must follow in that general direction. The doctors are going to demand specialization of nurses, whether they like it or not. If this be true, nurses, of course, must be specially trained. Miss Parsons brought out a fact which impressed me; namely, that it is practically possible to teach nurses the fundamentals of nursing anywhere, just as, I have no doubt, it is possible to teach medical students the fundamentals of medicine almost anywhere. As time goes on, following Dr. Frost to a certain extent, and also Dr. Fernald, it seems to me inevitable that this will prove insufficient, and that nurses must be specialized. We must draw the line somewhere as to the extent of general training, and must begin the specializing process before it is too late; it must be understood, certainly in our larger cities, by nurses as it is by physicians, that they must be known as *experts* in some special line of work. Surgical nurses and obstetrical nurses are nurses specialized. This must inevitably go on, and we must continue to have, as we are now beginning to have, nurses who are specially trained in diseases of the nervous system.

The other question, of co-operation, is naturally one of very great importance, and co-operation, as Dr. Kline I think implied, seems to me has been, on the whole, in the wrong direction. I understand perfectly Miss Parsons' attitude that mothers should be unwilling that the daughters should undergo certain of the difficulties of nursing. It seems to me, however, that no woman should undertake nursing who is not thoroughly prepared to meet all that the work entails. If any relative of mine were going to take up nursing, I should point out distinctly at the outset the difficulties and hardships, the actual insults to which she might be subjected. If this be done at the beginning, I can hardly conceive why it should be used as an argument against special training in our mental hospitals, that the parents of the young women were not prepared for such hardships. At last we should break down the barriers, as we are now rapidly doing, between the mental hospitals (so called) and the general hospitals. A nurse is just as much subject to

insult in a general hospital, under certain conditions, as in an insane hospital. We need women, skilled if possible in the treatment of the insane, but certainly women trained in dealing with individuals as such, — in dealing with the mental side of the problems with which they are concerned, and not purely with the physical side. It is precisely the same problem that is facing the medical men to-day. Physicians are coming by degrees to recognize that the mind may be primarily approached as a means of treatment. Herein lies the possibility of a very great advance.

What we need to impress most — a very fundamental thing — upon our nurses, as upon physicians everywhere, is that mental nursing is really nursing itself; that the care of the body is an essential but relatively small part of the entire duty of the nurse, and if by any system of co-operation this may be brought about, as, for example, by bringing the psychopathic hospital nearer to the general hospital, a distinct advantage to nurses in general and the community will be gained; it is for this fundamental principle, it seems to me, we should all work.

Dr. Elmer E. Southard, director, Psychopathic Department, Boston State Hospital: — I do not see that these two ideas are identical. I should think Dr. Taylor would hardly go so far as to say a good psychotherapist must be a man who has *not* had a general medical training. The specialized nurse, then, may very well begin with, and to my mind should at some time secure, a general nurse's training. In his argument for specialized mental nurses, I do not see that Dr. Taylor would be found fundamentally to agree with Dr. Fernald and Dr. Frost in their argument for separating the training of nurses for mental purposes from that of nurses for general medical purposes. He wishes to secure specialized results, but does that aim necessarily involve separation of nurses' training? I do not see that fundamentally it does.

Dr. Henry P. Frost, superintendent, Boston State Hospital: — If I was understood as advocating a different kind of training, a less exacting, less effective training in general nursing for the number of nurses that we require, I was misunderstood. If you will read my paper you will see that we believe in im-

proving our training school if we can, but we should stop trying to educate a large number of nurses to go out and serve the community. We should educate them just as well as we can, and we could probably do a good deal better by not trying to deal with so many. Of course with the thorough general instruction and training which we should seek to give our nurses they would get the special training on the mental side to which Dr. Taylor referred, and would eventually be specialized nurses.

Dr. Taylor:—Dr. Southard has stated essentially my position. I did not mean to imply that general training should be done away with. A certain amount of general training must be had, of course, for the foundation of any professional work; it is simply that we must place the point where the special training must begin.

Dr. Goss:—It may be that some training schools in this country are overtraining nurses. It is not true, however, of any training school in any insane hospital that I am familiar with, and I do not think we can give our nurses too much training. If we train our nurses to such an extent that they can do better elsewhere, then it is up to the Commonwealth to make conditions sufficiently attractive in other ways so that we can retain more of our nurses, but I do not believe, and I have never seen anything yet to convince me, that we are training our nurses any more highly than they should be trained. Even if we do start in with a larger number than are able to finish, some of them leaving in the middle of the course, those that leave are a great deal better while with us *with* the training than they would be *without* it, and I do not think that our courses are too complicated to be mastered by any one who is competent to be trusted with the care of human beings.

Dr. Charles E. Thompson, executive officer, State Board of Insanity:—I believe the results of the nursing vocation will vary in direct ratio to the standard set for that vocation, and from the discussion here to-day it seems to me that if we have not obtained the results we were seeking, it is perhaps partly due to the fact that our standard is not set sufficiently high. Perhaps our standard should be set much higher and we should strive to maintain that standard.

The chief duty of every one of us is to care for our patients. It seems to me the care of our patients is ahead of any other part of our hospital work. We depend quite largely upon our nurses in treating these patients. If we are satisfied with a lower quality of nurses, then we must be satisfied with a lower standard of results, and all that that means. This is a matter of organization, and if we have not obtained desired results, and have not maintained a high standard, then it is because we have not had the organization with which to do it.

I do not think we should be content with a nurse who has grown up in a hospital from the ranks and who knows the work of that hospital, and who, being a pleasant person, causes little trouble and therefore is put in charge of things because she is not a thorn in the flesh. I believe we should not be satisfied with that standard. We should get the very best superintendents of nurses the hospitals graduate. There is increasing difficulty in obtaining nurses, particularly with men, but that is due partly to the increasing number of hospitals and the increasing desirability of other occupations. Dr. Washburn, administrator of the Massachusetts General Hospital, has said that we cannot and would not decrease the number of paying occupations or their desirability, and that means entering into competition with them, and that could be best done by training and by paying larger wages, possibly with better surroundings and living conditions.

In our hospitals for the insane, it seems to me, we should require higher educational requirements for nurses on admission, and if all the hospitals at the same time could do that, it seems to me we could demand higher educational standards, thus starting new classes on a higher plane. Then, too, we should make a more careful selection of candidates, with greater care in looking up their references. Then, if necessary, higher wages. It seems to me attractiveness of the service is the principal thing, more important than higher wages.

We also need more homelike surroundings. It is interesting to note that in Massachusetts we have 15 cottages for employees, built largely in the past ten years, principally for nurses. Then, too, I think we should diminish the drudgery of the

nurses, as they are doing in the general hospitals. They have found that in training nurses it is a waste of time and money for them to do drudgery. If necessary, hospitals for the insane can also have another class of employees to do the drudgery work.

The hours of duty have been lessened. Possibly even shorter hours, with rotation between the different services, would be advantageous, — not keeping nurses too long on any one service.

Then there is the matter of food. We do not hear as much about poor food in our institutions now as we did five years ago, but unless a person is satisfied with his food and gets plenty of it and a variety, he is not going to be satisfied with much of anything else in the hospital. Our diets should be looked after carefully. The nurse who remembers the bright spots in her hospital career is the one who is going to help the most in the future of that particular hospital. She is going to refer more people to that hospital to take the training, and if there are many dark spots, she is going to remember those, and she is not going to advertise the hospital in the way we want it advertised.

The question of what other States might be doing interested me. I wrote to all of the States having State institutions, and received the following replies from 25 different States. Eighteen States have training schools, and 7 report no schools. In 18 States, out of a total of 107 institutions, 62 have training schools. In New York State, where there are 16 institutions, they have 13 training schools, with 546 pupils, and last year 166 graduated. In Pennsylvania, where there are 29 institutions (8 State and 21 county), there are 8 training schools, with 303 pupils, and last year 69 graduated. In Illinois, out of a total number of 9 institutions, there are 8 training schools. The number of pupils in these schools is not reported, but the number of graduates last year averaged 25. In Ohio, out of a total number of 7 institutions, there are 4 training schools, with an average number of 44 pupils, and last year 28 graduated. In Iowa there are 4 institutions, all of which have training schools, in which there are 125 pupils, and last year 41 were graduated. In Michigan there are 6 institutions, with 4 training schools, in

which there are 195 pupils, and last year 60 graduated. In Massachusetts, out of a total number of 15 institutions, in which there are 1,819 attendants, there are 11 institutions having training schools in which 668 pupils were registered Nov. 30, 1912, and during the year 119 graduated from these schools.

I believe that if our training schools have not been obtaining the results desired it is a matter largely of lack of proper organization. I think if we looked after that it would settle a good many of our difficulties.

Hon. John Whiting Mason, member, State Board of Insanity:— I am wondering whether there is any uniformity in the courses adopted in the different hospitals. Is there a definite first year's work laid out so that one who has taken the first year's work in one of these schools is fitted to take up the second year's work in a different school; or is each of the schools a law unto itself? One of the difficulties that has to be met in general educational institutions—colleges are struggling with it—is that the methods of training in the subordinate schools differ so widely from town to town and from State to State. I was wondering whether we were standardizing at all. Is it better for each school to make its own experiment, get its own experience, or, in co-operation, can they work together and evolve a general course that could be taken as a standard for all?

Dr. Tuttle:— I should like to answer Judge Mason. In 1906 the American Medico-Psychological Association (made up of superintendents of hospitals in the United States and Canada, and other men interested in mental diseases) appointed a committee to consider the matter of instruction in the training schools and suggest a course of study. This was done, and after some general observations a course of study for two years and another for three years was suggested. I do not know how much attention was ever paid to it, or whether the superintendents of hospitals ever read the report. I think, though, the suggestions therein made have been followed only in a general way, and that each one has adopted a course of study that he thinks suited to the needs of his own hospital.

Dr. L. Vernon Briggs, member, State Board of Insanity:— I do not know that I can add much to what has already been

said, that is, anything new. I believe that our valuable nurses are going to come from the female part of our community. I do not believe that we shall be able to increase our male nurses materially. I think we shall be able to increase our female nurses and to extend their services and usefulness into the male wards more and more.

One of the largest hospitals in Pennsylvania is now employing female nurses in almost all of their wards, and Dr. Mosher, of Pavilion F, Psychopathic Hospital, Albany, most of the time has only one male nurse on the male ward. He told me that when he saw any apprehensiveness among the male patients he sent out the male attendants and brought in a few female nurses, and the patients would generally quiet down and be very respectful and behave themselves.

In Maryland, at Bay View, they have a hospital of negro insane, and the last time I was there I saw seventeen-year-old girls in charge of a ward of most brutal looking negroes. They were left alone on the ward with those negroes, perhaps 20 or 30 at times; at other times a number of them were out working, leaving the girls with only three or four. These nurses were perfectly safe and were respected, where negro attendants could not do anything with these patients.

We have got to raise the standard of education. Requirements should either be high school or something equal to high school diplomas. The pay of the student nurse should be much less than it is now, and when they graduate their pay should be much more than it is now, as an inducement for the nurses to take the course and work up to a salary which would be commensurate with the work they have done in the hospital and the time they have devoted to study and training. In a good many hospitals there have not been many attractions, certainly no attractive positions, and the nurses and attendants have been taking care of these patients without any particular interest.

I would like to say a word in regard to social service. Some of our hospitals, as you all know, are doing more or less social service work and some eugenics work and some field work, but it has not been systematized and is not under any regular organization. The Governor has sent a message to the Legislature,

with a resolve accompanying it, which would give to every hospital the means of carrying on social service work, and also provide for a social service worker to organize and co-operate with the hospitals in organizing social service work, which would be paid by the State. I think it is his idea to secure the services of a good social service worker as soon as possible and make a "survey," as they call it, first of what is being done in the different hospitals and what the requirements of the different hospitals are, as near as can be, and then perhaps to call together the superintendent and the workers in each individual hospital and establish the work there. This bill provides means for doing it, and the superintendents would not have to put in any bill for social service work. There will be a hearing this afternoon, before the social welfare committee, at 3.30 o'clock, on social service, and those opposed to or in favor of this bill will be welcomed there to express their views. I feel that this is not a work the superintendents can carry out satisfactorily with the money they have. This resolve is to establish social service for all time, so that the hospitals shall have this fund to draw upon for their prevention and after-care work without diverting money from their maintenance.

The thirtieth semiannual conference was held at the State House on Nov. 18, 1913. Dr. Michael J. O'Meara, chairman of the Board, presided. The subject for discussion was:—

HOSPITAL DIETARIES.

The views of the different speakers as expressed at this conference were as follows:—

Otto Folin, Ph.D., professor of chemistry, Harvard University:— I have only one or two points to raise this morning because I do not suppose this is a question for prolonged addresses, but rather for conference, a matter of questions and answers.

The question of dietetics in connection with hospitals for the insane is peculiarly an economic question, because, after all, the feeding of the insane is a matter of feeding substantially well persons. It is, therefore, an entirely different problem from the feeding of the sick in general hospitals, and to have

reliable knowledge of different food products is of course of the utmost importance where such large sums of money are expended in the buying of food.

At the present time, as you know, your laboratory has been investigating the subject of flour, with reference to the selection of a given sample to be purchased. In connection with flour, it is to be noted that virtually all flours have substantially the same chemical composition. That is important.

The primary point to be considered in feeding large bodies of well persons is the economic phase of it. That means that the aspect of the food to be considered is, substantially, the fuel value of that food.

Now, when it comes to the selection of a substance like coal, the fuel value is also the primary value to be considered. In the selection of coal the chemist can tell you exactly relative to the values of coal. The values differ very materially. The analyses determine the relative cost that you can afford to pay for a given sample of coal.

In the case of flour, although the fuel value of that food substance is a most important one, the chemical analyses do not give the same information, for the reason which I stated a few moments ago, that all flours have substantially the same chemical composition. Therefore, the grading of flour is not based on food value of the flour. Since that is the case, we cannot, of course, grade flours by any chemical analysis with any very great degree of accuracy. On the other hand, from the fact that all flours have substantially the same food value, it follows that the cheapest flour is the one to buy, provided that it serves the purpose of making good bread.

There is no reason why one should pay \$5 a barrel for flour if flour costing \$4.20 would do. From the standpoint of economy, therefore, the first point of view which would strike one in connection with the buying of flour is that the cheapest flour is always the flour to buy.

The situation is, however, more complex than that, and it would be futile, I think, from the standpoint of economy, to invariably buy the cheapest flour. The reason for that is that all flour is wonderfully cheap in comparison with other food prod-

ucts. A pound of flour has fully twice the fuel value or food value of a pound of beef. If you consider, therefore, the relative cost of flour and of beef, flour is probably about twenty times as economical a food to use as is beef. That brings with it the suggestion, of course, that the thing to be used to the maximum extent possible in the feeding of persons like the insane is flour, but if you are to feed the maximum amount of flour in the form of bread, that bread must be good.

Now, good bread, as it was defined at the government trial by one of the bakers, was that "you like to eat it." The best definition which could be had throughout that trial was that bread was good to eat; that when you had eaten one piece you would take another; you still liked it and would take another in the course of a meal. That is what constitutes good bread.

It is the fuel value of food that you consider, and, considering that the human machine, like an engine, will consume only a certain amount of fuel in the course of a season, it follows that the more fuel you can put into that complex engine in the shape of cheap fuel—flour—the greatest economy, on the whole, will be accomplished,—a far greater economy than by feeding cheap flour, no matter how cheap, provided that that cheap flour cannot be made into bread which is good, in the sense of the definition or description which I have given.

Therefore, the important point in connection with flour is, not only to look into the market price, but also how it can be made into the very best possible bread; and I think there is, probably, from the standpoint of economy, not one single thing that can be accomplished in connection with a hospital for the insane that will accomplish so great a saving as that of procuring really good, eatable bread. I am not at all prepared to say that the cheap flours cannot be made into just as good bread as the best flours. I think probably they can, but it is equally clear that nine out of ten bakers cannot make, and do not make, good bread. The bread obtained from the ordinary cheap bakery is, in my judgment, almost uneatable, and I know something about bread, because I have baked it myself for the past ten years almost every week, and I know that the greatest determining factor in the eating quality of bread is the baking. It is not

the ingredients you put in; it is not, I think, the quality of the flour; it is the manner of the baking; and if flour can be converted into good bread, that is the important point. Whether it then can be converted into good bread, even though the flour be cheap, that is also important, but it is less important than having, first of all, good bread.

Now, if these various institutions were to purchase the same brand of flour at any given season, I think it would be exceedingly interesting for your committee if your chemist were to examine all the samples of bread made from that particular flour, and find out which of your bakers really know how to convert it into good bread. It is easy enough for the chemist to bake bread and compare it with the different samples of flour at the same time, and on that basis, perhaps, select a flour that will do, everything considered, even though he does not know just which sample is unquestionably the best, but supplementing that there should be samples of bread from the flour selected obtained from your bakers, all side by side, and examined by experts and by committees of your governing boards, so that you can also find out who are your good bakers and find out how they make good bread.

It is poor economy — the poorest kind — to be stingy on anything that goes into the making of good bread; lard, for example, has four times the value of meat, and if the introduction of a liberal supply of good lard into bread goes to make a good, eatable bread, it is the very best kind of economy to use it. Lard, or even butter, has four times the value of meat, and the addition of any such ingredients as will help to make "the staff of life" — bread — good, is the very best kind of economy.

The situation, so far as the commercial aspect of the handling of flour is concerned, is, I think, very unfortunate, and does not help very much, because, so far as I can see, the handling of flour, with reference to the needs of the bakers and the interest of bakers, seems to involve chiefly how many good-sized loaves will a given barrel make. It is absolutely immaterial to you how many loaves a given barrel of flour will make, for with you it is — on the average — purely the fact that so many pounds of flour have so much fuel value, and that the more of that flour

the patients will consume with pleasure the cheaper will be your cost of food on the average, during a season of sufficient length.

Question:— I would like to ask the Doctor what he meant by his statement “the cheapest flour is the most economical flour.”

Dr. Folin:— The cheapest flour is of necessity the most economical, since its fuel value is just as great as that of the best flour, and therefore the cost of it is largely in proportion to the price, provided always that it can make eatable bread. Also, I might add in that connection that there is no sense in estimating or laying a special value on the protein contents of flour. Flour, after all, has a great deal of protein. It has nearly as much protein as substances which you buy primarily for protein.

Question:— Then the old idea that the best flour makes the best bread is exploded?

Dr. Folin:— There is room for more investigation into the baking of flour and getting good bread out of a given flour than to any other phase of this subject, and I do not feel that the bakers now know how.

Mr. Whittemore:— I would like to ask Dr. Folin if he will tell us something about whole wheat flour as compared with the highly bolted white flour.

Dr. Folin:— That goes off into another line, rather than the economic value. There is, of course, a prevalent opinion that the whole wheat flour is, on the whole, more suitable for the maintenance of life. Now, I do not question that if any person or animal was required to live on flour alone, or substantially on flour alone, whole wheat flour would be better than fine flour, but, of course, in civilized countries we do not live on flour alone, and I question very much whether there is anything very real in favor of whole wheat flour, though of course we must not forget, for example, rice. It has been shown, as you all know, that the fine rice is really inferior to the unpolished article, from the standpoint of health, but I have not considered flour from the standpoint of health at all this morning.

Question:— You buy flour at \$6 a barrel, another at \$5:

if you have a good baker the \$5 barrel will turn out just as well as the \$6 one, — is that it?

Dr. Folin: — That is what I would like to find out.

Question: — Would a good baker give you the same results with a \$5 barrel as with a \$6 one?

Dr. Folin: — I rather think so; at least I do not know of any reason why it should not be so. The greatest problem to strive for is to get just as good bread out of \$5 flour, or indeed out of \$4 flour. That is the phase of it which has not received adequate study.

Dr. Briggs: — Any question of difference in digestibility?

Dr. Folin: — The fuel value necessarily includes more or less of the digestibility, because when we speak of the fuel value we mean the value of that which is digestible, and the digestibility of flour is very high.

Mrs. Susanna W. Berry, trustee, Wrentham State School: — Is it a relevant question to ask Dr. Folin what he means by good lard? This does not come directly under the subject of flour, but is an important factor in the making of bread. Is it possible to obtain good lard in the stores of to-day, or will we have to go back to our mothers' time and try out our own lard to have good lard?

Dr. Folin: — I am afraid I cannot answer that question. I do know that baker's bread somehow always seems to have poor fat in it. What kind of lard they have I do not know, but it is bad.

Mrs. Williams: — I would like to ask Dr. Folin whether he considers it absolutely necessary to have fat in bread. In my home we do not use fat, but milk. Can he tell us?

Dr. Folin: — That question illustrates a point that I endeavored to make this morning, — that skill in baking is the most important thing of all to acquire. I know, too, that lard, or shortening of any kind, is not necessary to make good bread. With the shortening, it is usually easier to get good bread, and good bread that does not dry up so readily. Milk, on the other hand, is not necessary for the making of good bread. I used to make bread with milk in it, but now make it with water and it is fully as good.

Dr. Henry R. Stedman, chairman, Trustees, Taunton State Hospital:— The food question has given us much thought at the Taunton Hospital. For years I have been in the habit of making my visits at the patients' mealtime, examining each article of food served and tasting food frequently. It has also been the usual thing to ask a number of patients individually whether they had sufficient food. The result has been what I should call a good table, everything considered. In spite of these precautions a number of minor shortcomings in that department have been recently brought to light. A thorough investigation was then made covering the past year in which outside inspection was kindly furnished through an agent from the State Board who reported the conditions to be satisfactory, and we finally made sure that at all events there was no really serious defect in the quality, quantity or manner of purchase of the food supply, and the smaller matters were rectified.

I tell all this simply to show that we have done our utmost to make sure that the patients and nurses have proper food and enough of it, and especially to lead up to the fact that in spite of all our efforts complaints do not cease. They never will entirely. Whenever in a household or institution the dissatisfied wish to have a handle for complaint, the food supply is always seized upon first. There should be some way in which to at least attempt to make the true situation plain to everybody, and especially to satisfy ourselves that we are standing on firm ground.

Now, your Board, to which the hospitals are indebted for constant helpful suggestions, can be of signal service in this direction if, through the information acquired on your visits of inspection as regards the state of the table and the larder in each hospital, you could suggest some uniform standard of diet for all the hospitals, or at least enable each superintendent to know whether he is doing as well by his patients and nurses in this respect as his fellow superintendents. As the situation is now, they have no such information. Even this probably will not satisfy the critical, and moreover a control test affords the only proof of the real state of the patients' bodily nutrition. Such a test will, I believe, be found by weighing the patients.

I have long thought that weight records of the inmates of our hospitals, when kept at all, were not systematically utilized for the purpose of ascertaining beyond question the state of the bodily nutrition of our patients. In the New York hospitals a weekly weight record, uniform throughout the State, is kept of all the patients, and has been for many years, not only for the purely medical purpose of keeping in touch with their bodily condition, but of giving the inquiring public, when needed, actual proof that the patients are sufficiently fed. Any sign of material falling off in weight is taken to call for immediate change in the supply or quality of the food on the wards; or if it be due to the refusal of food by reason of the mental or physical condition of certain patients, special measures and diet are resorted to.

I have the impression that in this State this has been done only on a limited and inadequate scale. Patients are generally weighed on admission, and the weights of acute cases are followed up. In one or two hospitals, also, monthly weights are taken, but so far as I can ascertain there has been no endeavor to utilize the weight record of *every* patient as a standard for the regulation of the food supply. It seems to me to be of much importance, and accordingly we have recently adopted this plan at the Taunton Hospital.

Mr. Whittemore:— I would like to hear from the superintendents as to how far they are adopting or have carried forward this idea of regularly weighing patients and making a comparative examination of the records.

Dr. O'Meara:— Mr. Whittemore wants to know how far the superintendents are carrying out this idea of regularly weighing the patients and knowing from that standpoint whether they are making progress or not.

Dr. Scribner:— At the Worcester Hospital monthly record of the weighing of patients is kept in practically all cases.

Dr. Flood:— At the Monson State Hospital it has always been done in the same way.

Mr. James M. W. Hall:— I would like to ask this question: How far is weight a test of health?

Dr. O'Meara:— I don't know whether Dr. Stedman wants

to answer that question or not, but Mr. Hall asks how far weight is a test of health.

Dr. Stedman:— I am not sufficiently expert in that direction to say, but I think it is pretty surely the case that in any institution where the patients are of sufficient weight and seem tolerably fat and in good nutritional condition it is a pretty good indication of the general health of that institution.

Mr. Hall:— Would uniform weight indicate uniform health?

Dr. Stedman:— Variations in weight would, I think, indicate variations in health.

Mr. Hall:— I am not doubting, but in my own family we have recently found a reduction of weight of 25 pounds with a greater increase of health and strength.

Dr. George M. Kline, superintendent, Danvers State Hospital:— I might add that we weigh our patients at the Danvers State Hospital, and have for a long time, putting down the weights on a chart, and making graphic curves. By means of these curves it can readily be seen whether patients are gaining or losing weight. I personally believe the weight of patients is one of the best and most valuable criteria we have as to the outcome of the mental disease. We must consider, of course, the various psychoses in that connection; that with an excited, maniacal patient an increase in weight is looked upon as a possible subsiding of the excitement, and that a decrease in weight is an unfavorable sign in a depression. In those psychoses from which we expect the patients to recover we look for a change in weight as one of the first indications that improvement is taking place. In a psychosis, such as general paralysis, an increase in weight is looked upon as an unfavorable sign.

William F. Boos, M.D., Boston:— The question as to whether butterine, or, as it was originally called, oleomargarine, should be used generally, has been very much discussed, and I think it is one of very great importance, particularly in institutions where the present price of butter is rather high for general use. In view of this discussion it may not be out of place for me to describe the various butter substitutes more in detail.

Mège-Mouris was the inventor of oleomargarine, and his original process, which he published in 1870, consisted in taking 1,000 parts of well-washed and finely chopped fat, digesting this with 300 parts of water, to which had been added one part of carbonate of potash and two stomachs of hogs or sheep. This digestion was carried on at 113° Fahrenheit. After about two hours the membranes are dissolved, under the influence of the peptic fluid from the stomachs, and the melted fat rises to the top. The fat was drawn off, salted and allowed to cool, so that the neutral fats, palmitin and stearine, would crystallize out. Then this semisolid mixture was subjected to hydraulic pressure. A fluid mass was pressed out, to which the name of "oleo," or sometimes "oleo oil," was given. This fluid mass made up about 50 or 60 per cent. of the entire quantity of digested fats. To the oleo was then added 10 per cent. of its weight of milk and a little butter coloring, and the product was worked up like butter. This was the original process for making oleomargarine.

The process used by Armour, Swift and others, practically in the form I shall describe, is the following: the fat is first washed thoroughly in tepid then in ice water; then it is allowed to stand in a cold room until quite cool. The purpose of this preliminary process is to remove as far as possible any odor which the fat may possess. Then the fat is rendered at a temperature between 130° and 175° Fahrenheit. The resulting oil is allowed to cool slowly so that the stearine and palmitin may be crystallized. The resultant mass is submitted to hydraulic pressure and a fluid known as oleo is expressed and is allowed to flow into tanks to cool. Here it solidifies into a mass called oleomargarine.

To-day fresh leaf lard is also used in a great measure in making these substitutes for butter. The leaf lard is treated similarly to the beef fat, and the resulting product is called neutral lard. Some manufacturers mix neutral lard with the oleo obtained from beef.

The entire process through which the fat is carried has for its object to remove as much as possible any offensive odor and taste; that is, to purify the fat to the greatest possible extent and to make it keep well afterwards.

When the fats are obtained in proper condition for making the mixed oleomargarine from beef and pork fat they are mixed in varied proportions, the proportions depending upon the destination of the finished product. If it is meant for a warm climate, more oleo is used; for a cold climate, more neutral lard or lard substitute is introduced into the finished product. The mixture is flavored with butter, or rather, in the process used especially for the preparation known as oleomargarine, with milk, the proportions used being about 48 gallons of milk to 2,000 pounds of fat.

In making this finished product the neutral fats and oleo are melted thoroughly, mixed and agitated with the milk until a perfectly homogeneous mass is obtained. This is done at a temperature sufficiently high to keep the mass in solution; the resulting product is then run into cold water, and as it cools it is broken up with paddles so as to produce a granular mass rather than large cakes. Then it is salted and worked just like butter. This is oleomargarine. It contains, as I said before, a trace of butter color and has a slight butter flavor. Of course, it is very slight, because there is very little butter fat present.

Butterine is made by the addition of butter itself, instead of milk, to the mixture of neutral and oleo. Two kinds of butterine have been distinguished in the past,—creamery and dairy, the creamery butterine containing considerable butter, in some cases as much as 50 per cent., while the dairy butterine contains only 10 to 15 per cent. butter.

The physical properties of butterine are very similar to those of butter. The essential difference between butterine and butter lies in the fact that butter contains rather a high percentage, about 8 per cent., of volatile, neutral fats. These are the substances which give the peculiarly agreeable flavor to butter, and, of course, to the extent to which butter is added to the mixture of neutral and oleo we obtain more and more the butter flavor, so that a mixture containing 50 per cent. butter has a very fair butter flavor. Outside of the flavor there is practically very little difference.

Butterine and oleomargarine are very pure products. You cannot possibly make them out of anything but the purest and

freshest fat because impure fat would impart a taste and the product would not keep and could not be used commercially. There is practically, therefore, nothing in the market which is purer than oleomargarine or butterine.

I think the main reason why we object to butterine is because most of us are so accustomed to the use of butter. We could undoubtedly learn to use butterine, or even oleomargarine, in infancy as we learn to use butter. It is simply because we know the very much superior flavor of butter that it is difficult for us to get accustomed to butterine. I have tasted the various grades, and the main difference that I can find between butter and butterine or oleomargarine is that oleomargarine, not containing any butter, is flavorless. It is rather the absence of any flavor than the presence of any disagreeable flavor, to my mind. The butterine is probably just as easily digested as the butter, and it certainly has the same food value as butter, perhaps even a greater one, since it contains less water. Luckrig, who made quite an extensive investigation of the food values of the various grades of butterine, came to the conclusion that butterine is the equal of butter in digestibility and food value. Renovated butter is more in the nature of a substance recovered from waste products. In its manufacture practically only the waste butter of dairies is used, the latter being collected in a great many places and made over. Renovation attempts to remove, by careful washing, any rancidity which may be present, in order to make the product taste as much as possible like normal butter, but I understand that you cannot ever make renovated butter taste like fresh butter.

I would say that, from the standpoint of purity, oleomargarine and the various forms of butterine are perhaps preferable to renovated butter. They certainly are preferable from the aesthetic point of view.

Dr. Thompson: — I would like to ask the Doctor if the word "butterine" is one described by statute and must contain butter, or can dealers use the word butterine or oleomargarine indiscriminately? Must the product contain butter if it is called butterine?

Dr. Bovee: — I am not absolutely certain, but it is my impres-

sion that the use of the word "butterine" is not restricted to any particular mixture. Milk contains a little butter and therefore probably the term can be used if the mixture contains any of the constituents of butter.

Dr. Thompson:—Even if butter itself is not present?

Dr. Boos:—Yes.

Dr. Flanders:—In some work I have done on oleomargarine and butterine I found they contained vegetable oil, in addition to what Dr. Boos mentioned, sometimes as high as 30 per cent., and very often there was present 30 per cent. cotton seed oil. The thing that is most curious to me in regard to butterine is that it is pretty hard to see the difference between a sample of butterine which sells at 11 cents a pound, and that which sells at 18 cents a pound. I have, on two or three occasions, found in the cheapest samples submitted as high as 30 per cent. butter, but I am not sure whether butter that is renovated is not used in any proportion in these samples. That may be the reason, but it seems rather strange that the cheapest on the market should occasionally contain a very high per cent. of butter.

Dr. Boos:—The presence of vegetable oils is due to the admixture of cotton seed oil; oil of sesame is also used to some extent. The German government at one time required the addition of a certain per cent. of oil of sesame to artificial butter, because the oil of sesame can be easily detected by a chemical test, hydrochloric acid giving a red color with it. This requirement was made to prevent fraud and the selling of butterine for butter. At one time the agitation against butterine in Germany was so bitter that the government required all artificial butter, that is, every sample that was not entirely butter, to be colored green. I remember the time when green butter was sold in Heidelberg. This did not last long, however, because the authorities soon realized that it is radically wrong to prejudice the public against such a valuable food product. The addition of cotton seed oil and glucose is a practice which I think is not carried on by standard manufacturers. It is not done, I think, by Armour and Swift. Smaller manufacturers use all sorts of filling agents, but I think the grades of butterine bought from big manufacturers do not contain these mixtures.

Dr. Flanders: — I have analyzed samples of all grades, and I think manufacturers in this country practically all use cotton seed oil in their product. I have only two on record whose products do not contain cotton seed oil.

Dr. Thompson: — These samples in which you did not find cotton seed oil, were they high priced?

Dr. Flanders: — I cannot answer that, Dr. Thompson, I do not recall. It seems to me, however, they were rather the lower class. I am not perfectly sure. They may have contained sesame oil. At the time I did that I was not able to make a test for sesame oil.

Question: — May I ask if vegetable oil is very objectionable?

Dr. Boos: — No, I do not see the slightest objection to vegetable oils, especially cotton seed oil, which is a very valuable food product. In European countries cotton seed oil is used in salads in preference to olive oil. If you go into a shop abroad and ask for salad oil, they will always give you cotton seed oil. It has been my experience that when I asked for olive oil in the best groceries abroad and mentioned its use for salad, the grocer showed surprise and said olive oil was not good for salad and advised me to use cotton seed oil. Cotton seed oil is the equivalent of olive oil as a food product, and its flavor is very pleasant.

Dr. Joseph B. Howland, assistant administrator, Massachusetts General Hospital: — Dr. Thompson asked me to say a few words, particularly with regard to the service of food to the help. I feel that there are certain things we do not do in most institutions that we ought to do in regard to serving meals.

I say to the heads of different departments, "If you have any complaints as to the *kinds* of food served I do not wish to hear them." I am responsible for that, and go into it and decide that such and such a thing shall be served, and if the employees do not like what is served they will have to go somewhere else, because I have considered it and will not change. Any complaints of *service* I want to hear. As a matter of fact, I think the trouble we are having in most institutions is due to poor service.

The problem in the general hospitals is more difficult than in the State hospitals. We have a greater variety of help. The

cheaper help is not employed in the State hospitals so much, because you have your hospital inmates to call upon. We have so many grades of help, from the ignorant foreigner to the high grades of helpers, that the problem is very difficult. We should endeavor to separate these classes so far as possible, because it is not pleasing for one who has good table manners to be seated beside some one who has the worst of table manners. We should have graded dining rooms if possible, and if not possible, we should have small tables wherever we can. The small table allows friends to sit together, and allows one to arbitrarily place people with unpleasant table manners to one side, where they are not as objectionable as they might otherwise be. Small tables, of course, take more room.

As to the service, we find it is very difficult to keep up the standard in the dining rooms for the help. Other employees who have to wait upon them do not like it. The help are naturally unpleasant to wait upon. I think a great deal of this unpleasantness may be overcome by having present a responsible person in the dining room, who will act as a restraining influence and who will see that people do right and that the proper service is kept up.

I find that there is a tendency to be very lax in the service and preparation of food, or at least keeping the food in the proper condition, for the help. For instance, if we make our coffee — as it is made at the Massachusetts General — the same for all, there is a great tendency to have it stand around in pitchers until lukewarm. That should be attended to, and if a few essential things like that are attended to, you will find your complaints are very much fewer. There is no reason under the sun why the help should not have boiling hot coffee, just as good as anyone could wish. Food should be kept in steam-tables.

Up to a short time ago, at the Massachusetts General, we felt that, as a matter of economy, it was wise to put food on the table and allow the employees to help themselves. We found they were all running around the table, picking out the good things, and destroying a great deal of the food. Since then we have come to the individual service, and this particular thing has helped a great deal. I think, so far as this is possible, it should

be carried out. I believe it makes for a saving of food. It costs slightly more for waiters, but I believe we should all strive for individual service. It allows a decent person to get decent service. I think what I spoke of -- having a responsible person in the room -- is very important. The help get to fooling, throwing the food around. If it is unpopular they are sure to mix something with it; baked beans they might spoil with salt. If there is some one around to prevent this you have overcome one of the greatest difficulties in the dining room for the help.

Dr. Thompson: — How do you straighten out the individuals?

Dr. Howland: — It depends upon how we value them. If a good man, we give him a chance to do better. If not of much use we make an example of him and discharge him.

Dr. O'Meara: — Do you have particular articles of diet that get into the waste, say, for instance, baked beans? What percentage of your beans that you cook are used up? What is the percentage of beans in the food destroyed? You said the help sometimes put sugar, or salt, into the beans, and in that way destroyed them. Do they regard beans as objectionable? Do the help pick out some particular articles?

Dr. Howland: — I think if you allowed the help to have their own choice, roast beef and steak would be two of the things they would select, but baked beans would not be there. You have got to have simpler food, but it should be well cooked.

Dr. O'Meara: — What I was trying to get at is, how large a percentage of that type of food which seems objectionable to the help gets into the waste?

Dr. Howland: — With good service, very little; with careless service, a great deal. We have all of our garbage inspected as it comes from the different dining rooms, and the report comes to me. If an excess of some one thing is found, we immediately start inquiries as to why that is there; whether it is because of the unpleasant way in which it was served, or whether the service is too generous, or whether the food is too poorly cooked or unpopular. There are things that have been cut out, or have been served less frequently, because we knew that the help did not like them. It is no use to continue serving the same thing if it is not eaten.

Dr. O'Meara:— Any difficulty with your fish? Will that be eaten up?

Dr. Howland:— No trouble with fish.

Dr. O'Meara:— Any difficulty with tripe?

Dr. Howland:— Tripe is not a popular food.

Dr. French:— Do you supply milk, as a rule?

Dr. Howland:— We do not have it to drink. We serve it with cereal in the morning, in individual pitchers.

Dr. French:— You do not put it on the table and let them help themselves?

Dr. Howland:— No; because if we did that the first two or three would drink it.

Dr. French:— How about milk for the tea or coffee?

Dr. Howland:— Milk is added before serving.

Dr. French:— How about beef stew; is that popular?

Dr. Howland:— Not always; still, if it is well made it is eaten. When it is very unpopular we find it is due to carelessness in preparation.

Dr. Thompson:— Just what do you mean by individual service? Will you please describe it more fully?

Dr. Howland:— For breakfast and supper we do not try it because the meal is simple; but for dinner, when meat and a vegetable or two and soup are served, we actually give individual service just as you have it in the home. Some one brings in the plates, with the various portions served in the proper amount, and it is carried out to that extent.

Dr. Thompson:— Milk or cream is served in a small pitcher, the same as in a hotel?

Dr. Howland:— Yes.

Dr. Thompson:— How about chicken pie? How is that served; individual service?

Dr. Howland:— Individual service; from the same table; brought in when the people arrive. As a matter of fact, for the first table we usually serve the food on hot plates five minutes before, or as near as possible at the time of opening the dining-room door, so there will not be too much delay.

Dr. Thompson:— Each one has an individual pie?

Dr. Howland:— No, each one is served from the large pies, on individual plates. I would not advise individual pies; it

would be too complicated. That would be a great deal more of a job for the chef than making large pies.

Dr. Thompson:— Couldn't do it in the kitchen?

Dr. Howland:— I think you have got to try to strike a happy medium. It is no advantage to any institution to have conditions in the dining room so poor that the help are changing all the time. That is a great drawback to the efficiency of any institution. We have got to make conditions good enough so that the help will stay.

Dr. O'Meara:— Do you have to vary the diet very much?

Dr. Howland:— We make a ten-day bill of fare, and employees do not then know what they are going to have on a certain day. We make out the menu ten days ahead, and, at the end of that time, for another ten days, and try to get as much variety in that ten days as possible. In some institutions they will have roast beef one day, stew one day. When the help know exactly what is to be served, they have already made up their minds whether they will like it or not. If it is a surprise I think it goes a little better. Of course, fish day, Friday, we do not make any variation.

Dr. Thompson:— You have carried out, probably as far as any hospital, the waste-accounting system. Can that be carried out so far that the employees do not get enough? Have you seen any tendency that way, — that your people in the kitchen and serving rooms are watching that too closely?

Dr. Howland:— No.

Mr. Whittemore:— Tripe being unpopular, do you eliminate tripe from the bill of fare?

Dr. Howland:— No, not absolutely; but perhaps we would not have it as often as we would like to. We have to keep up the variety, though, and must serve some foods that all will not agree upon as popular.

Dr. O'Meara:— Is it eaten up when you do serve it?

Dr. Howland:— Not as well as other things that are better liked.

Dr. O'Meara:— Are there other articles of food in connection with the service of which there would be much waste?

Dr. Howland:— Yes, there are, — stew, beef loaf and braised beef.

Dr. O'Meara: — Is there any way of obviating the waste?

Dr. Howland: — I believe that you should make your service attractive and your cooking good. Simple things well made get eaten up nearly every time, but if it is simple food poorly cooked and worse served, then it certainly will be wasted. I think you should have just as experienced help in your cooking of the food for help as for any other class of employees or patients.

Dr. O'Meara: — Isn't there a tendency to neglect simple food, instead of taking a little pains in the cooking?

Dr. Howland: — Very possibly, if the kitchen knows it is for the help; and that is the thing we have got to have, — high-grade people to superintend, to see that this neglect does not occur. I talk as if we had fully accomplished that; we have not, but we have accomplished much in this direction.

Miss Georgie A. Bacon, trustee, Worcester Hospital: — Have you succeeded in arranging a series of meals where they will be perfectly satisfactory to all?

Dr. Howland: — No, we have not and never expect to.

Miss Bacon: — Do you find any one meal perfectly satisfactory to all?

Dr. Howland: — I believe roast beef is very popular. I have never heard of any complaints.

Dr. Woodward: — Your idea of individual service is simply that each person has a portion placed upon his plate; you do not mean that the waiter goes about passing the food?

Dr. Howland: — No, I do not believe that is practicable. I think you should serve what you consider a fair portion, but in doing so you may put upon the plate something one person won't eat. If you consider their tastes, they will eat all one thing and nothing of another, picking out carefully the white meat, etc.

Dr. Woodward: — Would you put vegetables or anything on the table?

Dr. Howland: — No, if they ask for a second helping it is taken from the steam-table.

Dr. Woodward: — You put one's plate on the table with the meat and vegetables on it before one comes into the dining room; is that satisfactory?

Dr. Howland:— It is not ideal, but is what you must do when the time is limited.

Dr. Woodward:— In our own hospital it does not seem to be at all satisfactory.

Dr. Howland:— That does not apply to the nurses; the nurses have a service such as restaurant service. After they sit down they are told what there is and are served with what they ask for.

Dr. Woodward:— You mean by help, kitchen help?

Dr. Howland:— Any general hospital has a large class of people — porters, cleaners, house men, elevator men, etc. — a large class you do not have in a State hospital.

Dr. Thompson:— Do the nurses have any choice of meats, for instance?

Dr. Howland:— No.

Dr. O'Meara:— Do the nurses have a menu?

Dr. Howland:— Waitresses tell them what there is; there is no printed menu.

Dr. O'Meara:— Is there enough variety in their dietary so that they have different things at each meal from which to select?

Dr. Howland:— Not at dinner. At luncheon there is apt to be cold meat and a hot dish; that hot dish may be tripe, and many do not like it, but we try to have a popular cold meat at this time.

Dr. Thompson:— How many nurses does one waitress serve?

Dr. Howland:— I think they serve about 8 to 12, and that service is not the very best. It is not as good as I would like to see it, but the best that we can do.

Mr. Whittemore:— The plate containing food is never placed upon the nurses' table before the nurses come in?

Dr. Howland:— No, I was speaking of the help.

Dr. Southard:— Referring to the cost of flour, do you find the cheap flour is good? Have you two grades?

Dr. Howland:— No, one grade of butter, one grade of coffee, one grade of flour, for everybody.

Dr. Southard:— No trouble about fish?

Dr. Howland:— No, we do not have any trouble. Those of us who have our institutions in Boston are fortunate, because

we are pretty sure to get fresh fish. We never use butterine. I believe in it just the same. For State hospital work I should certainly prefer it to renovated butter.

Dr. Emerson:— What proportion of the food brought into your stock rooms and then issued in its various ways through the dining room may be considered to go out as legitimate waste? Has it been weighed up or measured in any way?

Dr. Howland:— I do not believe I can answer that satisfactorily. Of course the food goes to the various kitchens as weighed food, and the waste goes into the garbage room as so many quarts, and that standard we have set for ourselves as a fair one to follow. I cannot give you any comparison of waste in pounds compared with raw material in pounds.

Dr. O'Meara:— You watch your waste very carefully, so that if there is a large amount you can ascertain the cause and apply a remedy?

Dr. Howland:— It is seen every day, from every ward and every dining room, once a day.

Dr. O'Meara:— You know just the articles that go into the waste?

Dr. Howland:— Yes; for example, from a certain ward of 20 patients, report comes back, we will say, of 4 quarts' waste. If there is no comment with that except the weight, it is our custom to understand that this is the general ordinary garbage. If there is any particular thing prominent, that is noted; *i.e.*, there are 4 quarts of garbage from Ward D and the word "cereal" is shown. That means an excess of cereal; that it is time to look into it and somebody does, first to see whether the nurses served too large portions, or whether the cereal was not properly cooked, etc. This is followed up immediately every day.

Mr. Whittemore:— That report comes from the nurse in charge of the ward?

Dr. Howland:— No. The garbage comes back from the ward to the garbage room and there we have an assistant dietitian who looks after that pail, which has a metal number corresponding to the ward, and she sees that garbage actually poured out from the pail to the barrel, and she sees what the contents are and writes in her book her estimate. The pail

contains 20 quarts. She estimates how much there is in the pail and then makes these remarks: "Excess of cereal," or whatever it is.

Dr. Walter E. Fernald, superintendent of the Massachusetts School for the Feeble-minded:—The problem of proper diets for the feeble-minded is rather more simple than it is for the insane. The feeble-minded, as a class, are blessed with wonderful appetites, and are far more concerned about quantity than they are about fine flavors, although they do appreciate good wholesome food. In fact, the voracious appetite which is characteristic of the great majority of the feeble-minded is one of the problems to be dealt with in planning their dietary.

They often come to us with a history of poor nourishment, with a coated tongue and evident severe indigestion. The father of a newly admitted patient said to me recently, "This boy eats more than the other four members of the family." The boy at home was being fed the regular ration of a middle-class American family, and his voracious appetite, his demand for butter, sweets, etc., was being satisfied. The feeble-minded eat until they feel gastric distention. At home the poor nutrition and indigestion, is, of course, due to the fact that their appetites are satisfied by eating large quantities of highly nutritious articles of food which are difficult of digestion,—pastry and doughnuts, cake and sweets.

It is fairly easy to construct a dietary which is satisfactory to most of our patients. Bread and butter, or bread and butterine, is the basis.

I was much interested in Dr. Folin's remarks about flour, but I do not think I quite get the point. We have never been able to make good bread out of poor flour, and I do not believe any one can do so. This brings to my mind the story of the man who taught his horse to eat sawdust; he said he had no trouble in teaching him to eat it, but just as soon as he had him taught the horse died! We have found that you must have good flour to make good bread. The difference between low-priced flour and high-priced flour seems to be that the ordinary cook or baker (and you must take the average, as it is not easy to get better than the average) can make good bread of first-

class flour, but is not able to make fine bread of poor flour. Palatability has much to do with the quantity of bread that is eaten and with the digestion, assimilation and resulting metabolism.

Our patients are given all the bread and butter they want and fruit in as large quantities as we can raise or afford to buy. Our patients are largely children, and we found that for years our dietary had been deficient in sweets. For some years now we have had on every table at every meal a pitcher of good syrup,—the quality of syrup that sells for 28 or 30 cents per gallon, a very palatable, attractive, amber-colored fluid,—and there is something the matter with the boy or girl who will let a meal go by without sampling some of that syrup.

We use vegetables freely. In institutions the patients' dietaries are very often deficient in variety of palatable vegetables. We use carrots, turnips, onions and potatoes, carefully ground or pulverized, in soups to a great extent, and they do much towards making the soups palatable and nutritious. With the voracious appetite, and the bolting of food that is common with the feeble-minded, we have found that meats are best given many of them in the form of soups or broths, or other dishes which involve the cutting of the meat before cooking or serving. It is much easier also to serve proper quantities to each patient, if the meats are in the form of soups or stews. In carving roasts or corned beef or other large pieces of meat, certain patients get less desirable or less attractive pieces. Perhaps one patient gets too much and another too little.

We have a stock soup of which I think highly, made largely of chopped joints, chopped bones, split marrow bones with the marrow carefully saved, and with the lean meat cut in small pieces. Cooks are apt to spoil soups by much boiling of the ingredients. The meat should be placed in cold water for an hour or so and very carefully heated. That soup, prepared in the way indicated, with a proper amount of beef and bones and joints, enriched with a large quantity of vegetables properly chopped, and thickened and enriched by rice or cereals or potato, and properly seasoned, makes an almost perfectly balanced ration. Some years ago I was talking with Dr. Clouston, and

found to my joy that he had used on his dietary for years a soup almost identical with the one used at Waverley. Of course the flavor of the soup can be varied from time to time.

It is in this form that many of our patients get all the meat that is given them. The change from the old method of serving solid meats to that class of patients has resulted in a wonderful improvement in the general health and nutrition of these patients.

The use of the bone marrow and joints leads up to the subject of fats. Institution dietaries are very apt to be lacking in fats in palatable and nourishing form. A patient will eat fat if it is presented in an attractive form. Since we realized this fact we have increased our use of butterine, butter and of fat salt pork. Fat pork is for some reason in rather bad favor with amateur dietitians, although I know of no reason why it should be. It is simply fat, and if properly cooked is very easy to digest. It is probably the cheapest and, next to butter, perhaps the most valuable means of adding fat to our dietaries. We use it freely in pea soups and in garnishing for fish and other dishes, and our patients like it very much. Our working patients in winter have for their supper slices of fat pork nicely fried. I learned in a lumber camp with Dr. French one cold winter night that this makes a very attractive supper when the temperature is down to zero and people have been working out of doors.

For desserts we give our patients very simple puddings of rice, tapioca, farina, etc., with a good deal of milk and sugar. In our simple dietary milk has a very important place of course.

We find it easy to keep our patients well nourished, although it is very difficult to keep the feeble-minded well nourished in a private family, especially a well-to-do one.

Dr. O'Meara:— Do the help at your institution feed from the same dietary?

Dr. Fernald:— No, our children's dietary is much more simple than that of the help.

Dr. O'Meara:— Do you have any difficulty in feeding the help; that is, are they apparently satisfied?

Dr. Fernald:— I think they are. Our institution is broken

up into rather small groups. We have colony employees who eat in four different dining rooms, and at Waverley in three different dining rooms. We have, as Dr. Howland has, the individual service. The waitress serves from a steam-table directly to the employee. Of course, one employee is able to stir up a great deal of dissatisfaction with the food. About a year ago, when I thought we had the best food and the best service we ever had, for two or three months our people were very much dissatisfied with their food, but I find that boys in college and girls in normal schools and boarding schools go through this same experience, and I believe there is a bit of psychology here that is inevitable. The quality of our food is the best. I do not believe there is any such thing as a bargain in food supplies. There is good food and there is bad food. I think the dietary should be simple, and everything well cooked. If you have a simple dietary everything on the bill of fare must be good or your meal is a failure. The very best quality of bread, butter, tea and coffee must be used if we are to keep our people well satisfied. Of course, every one does not like the meals of any one day, but if they do not like what is served at one meal they will what is given at the next.

Dr. O'Meara:—Can you make first-class tea or coffee in large copper vats in the sense that it is regarded as first class when it is served at home?

Dr. Fernald:—I do not think we can, as a rule, and yet at the popular lunch counters one gets coffee made by the barrel which is excellent.

Dr. O'Meara:—The reason I ask is that at all the institutions the coffee and tea tastes about the same whenever I have had an opportunity to taste it, and it does not taste like the coffee served at the first-class counters. I wonder why, because they cater to as many persons as they do in an institution.

Dr. Fernald:—I have never been able to understand that.

Dr. O'Meara:—Is your coffee of good grade?

Dr. Fernald:—I am told we are using exactly the same grade as is used at the most popular lunch counter.

Dr. O'Meara:—Is it served with cream?

Dr. Fernald:—That has a great deal to do with it.

Dr. O'Meara:—Would hot milk give that fine flavor?

Dr. Fernald:—I think it would. Of course, when we are being criticised it is hard to remember that only a few months ago we were standing before legislative committees, and if we wanted \$1 more for food we had to give the committee a very good reason why we should get it.

Dr. Henry P. Frost, superintendent, Boston State Hospital:—As I understand, I was expected to discuss hospital dietaries, as distinct from the general topic of institution dietaries. Not having had time to prepare anything, I wondered what I could do best. I wondered if all the members of the conference were familiar with the work done in New York institutions under the State Commissioner of Lunacy some years ago, which was a very comprehensive investigation of the whole question of food supplies and the utilization of fat. Some very valuable deductions were drawn from it, so I have made a very brief abstract of that.

I would like to answer Mr. Whittemore's question about the weight of patients. I believe in weight as a standard of nutrition, but perhaps am not as enthusiastic as some other people. One of my patients announced in the dining room one day that if they had a fat superintendent perhaps they would get fed a little better. We weigh our acute cases weekly and the more prolonged cases monthly, and we show their weight in graphic form, which is a very convenient reference and a very valuable index.

The thirteenth annual report of the New York State Commission in Lunacy (1901) contains a report by Professor Atwater of Wesleyan University and the United States Department of Agriculture, embodying the results of three years' research work in the New York State hospitals with a view to determining a standard dietary for these hospitals based upon the physiological needs of the population, with the proper allowance for waste, and also for the purpose of devising ways by which the cost of the food might be reduced, if practicable, along with improvement in the dietary.

The study included such subjects as the kinds, amounts and actual nutritive value of the good materials supplied to the hos-

pitals; the amounts of food actually eaten by different classes of the hospital population; the losses of food by shrinkage and waste in the storeroom, kitchens and dining rooms; improved methods of cooking and serving the food by which variety and economy might be introduced; ways by which materials rejected in kitchen and dining room might be utilized; and, finally, ways in which the more expensive foods might at times be replaced by those which cost less but are equally nutritious and wholesome.

It was found that shrinkage and waste amounted to at least one-fourth of the food purchased,—a figure which the investigator regarded as excessive, though recording his belief that a certain loss was neither unnatural, unusual nor easy to avoid, and that much of it was inevitable, since previous studies had shown that in private families it might reach 10 per cent. and in boarding houses, where economy is expected to prevail, he had found the loss as high as 20 per cent.

The report, which is very comprehensive, discusses in considerable detail, but lucidly, food and its functions; the nutrients in food; the digestibility or availability of food materials; the fuel value of food; nutritive ratios; dietaries and dietary standards; physiological demands of different classes of the insane for nourishment; and grouping of food materials by proportions of nutrients.

The practical results of the study were: success in revision of the ration allowance to conform to the demonstrated requirements; diminution of waste resulting in lower per capita cost in the face of rising prices; a better balanced dietary and a more varied and attractive one; tables convenient for reference, showing the food value of all staple food supplies and the proper amounts to use in substitution of one for another without changing the nutritive ratio; and, finally, numerous receipts and suggestions for improvement in kitchen administration,—all of which well repay careful consideration.

So far as regards any peculiar requirements of the insane as a class the results of this study were negative, Professor Atwater concluding that bodily and not mental activity had relation to food requirement, though it must be said that no special

study of the metabolism was made, *e.g.*, in states of anxious depression, etc., in which nutrition suffers. The evidence, while not as complete as desired, tended to show no marked difference in digestive power in the infirm demented class of patients, but determined their need for nutriment as much less than that of more active patients.

This investigation, then, helpful as it was to all hospital administrators in the settlement of many obscure and puzzling questions connected with the broad problem of institution dietaries, did not include a discussion of special or hospital diets for the acutely sick, which I am reminded is the particular phase of to-day's topic which I was asked to discuss. This, so far as I know, is a medical question, to be dealt with in accordance with general hospital standards and methods, since we are not familiar, any more than Professor Atwater was, with any peculiar nutrition requirements of the insane, except such as are dependent upon their bodily diseases and their various derangements of bodily functions.

In the endeavor to nourish our patients who are acutely ill with mental disease we encounter, to be sure, certain unusual difficulties due to their mental derangement, often leading to persistent refusal of food or failure to take it in sufficient amount. Then it often happens that resort must be had to feeding by means of the stomach tube, continued in exceptional cases for years. In such circumstances it is, of course, difficult, if not impossible, to maintain good nutrition, especially as these patients are either very inactive or else agitated and tending to exhaustion. Milk and eggs are the chief dependence in these cases, but it is important to vary the diet with broths, meat juice, purées of beans or peas, etc., and to add lime juice as an antiscorbutic.

Good classification of the patients is essential for a workable distribution of special diets, for it is practically impossible to make the proper distinction if patients of various classes with differing requirements are served together.

Small reception wards, hospital wards and infirmary wards permit the grouping apart of three classes of patients, all requiring special diet, but each group differing somewhat from

the other two in its special demands, while all the remainder of the hospital population is suitably cared for with the regular dietary if proper regard be paid to their group variations in bodily activity.

Each of the three special divisions I have mentioned will receive a liberal allowance of milk and eggs, broth, soup, custard, toast, etc., the special diet staples, and in addition the reception ward will need for a certain proportion of the patients in it the regular fare served to the able-bodied classes. The hospital ward will be called upon to serve restricted or specially prepared diets for individual cases, according to the physician's prescription, and the infirmary section must have stews, hash, etc., for the paralytics and those too demented to masticate their food properly.

The simplest arrangement for preparing and serving the diets that will meet the above-mentioned indications is in general the most effective. There is no necessity for great diversity in the special diets, and most of them can best be prepared for a number of patients together in the kitchen, provided it is possible to get the food quickly to the ward and to keep it hot in the ward pantry while serving it. Elaborate arrangements for cooking the special diet in ward kitchens are pleasing to look at and theoretically are very desirable, but, in my opinion, there is a deal of waste energy in thus distributing a function which, after all, too few nurses are qualified to perform in the best fashion. A good steam-table with a hot closet for dishes and a small gas or electric stove for boiling or poaching an egg, making toast and heating broth previously prepared in the kitchen will answer the requirements in most cases. By thus centralizing the preparation of special diet, the process is better supervised than if the same procedure is undertaken in a number of places, the issue of materials from the storeroom is facilitated, and waste is reduced to the minimum,—advantages which are to be weighed against possible better adaptation to individual taste by the other method, which, however, I doubt is thus obtainable.

Dr. Elmer E. Southard, director, Psychopathic Department, Boston State Hospital:— Statements have been made to the

effect that diets for the insane probably differ in no important respect from diets for the sane. This I think is not entirely the case. In the first place, the majority of our patients are in advanced years and possibly subject to metabolic disorder either connected with the advance of age or with other mental disease.

I therefore wish to make a few points concerning the theoretical necessity of more work on special diets for the insane.

First, the victims of mental disease are unusually prone to kidney disease. When the subject of diet in mental disease came up for this conference it occurred to me to look up the figures for kidney disease, expecting to find a high percentage on account of the advanced age of many of our patients. I was hardly prepared to find that about 70 per cent. of all autopsied cases showed chronic Bright's disease in some form.

My figures are derived from random consecutive autopsies at the Danvers and Boston State hospitals to the number of 1,030, examined from 1902 to the present time. Six hundred and ninety-three of these cases showed some form of chronic nephritis, and, if the list were swelled by inclusion of various rare forms of chronic kidney disease, it would not be hard to build up a percentage much higher than 70.

What is the significance of these figures? The majority of our patients come to autopsy in advanced years. Some authorities say that every person over fifty years of age has some evidence of chronic renal disease. If so, a portion of our percentage is accounted for. Another possibility is that the renal disease is a terminal condition which does not run parallel with the mental disease, and is either a late complication of the mental disease or is entirely independent of mental disease. The majority of those cases dying under forty and characterized by chronic Bright's disease are victims of general paresis; here it is difficult to avoid supposing that both the brain disease and the kidney disease have common causes.

Whatever be the cause of the high proportion of renal disease in our patients, it is clear that the problem is deserving of study, and that an exact study might yield dietetic conclusions of interest. Such exact study is well-nigh impossible under the conditions of hospitals for the insane, since no one seems

to know how to procure the twenty-four hours' amount of urine which is a desideratum for all standardized work. At least this appears impossible for more than the occasional case with the number of nurses and attendants available.

Secondly, the same autopsy series mentioned above yielded 132 cases of acute Bright's disease, or about 13 per cent. It is more within the bounds of possibility to make this diagnosis in life from small samples of urine and other signs. Still, it is a question whether there has been adequate attention to the matter of special diets in this group of cases.

Thirdly, Dr. Earl D. Bond, lately clinical director and pathologist at Danvers State Hospital, has called my attention to observations of his tending to show that glycosuria on admission to hospital is perhaps very often a matter of inanition.

Fourthly, still another matter which suggests further study of the question of special diets is the frequency of gastrointestinal disease, and particularly atrophy of mucous membranes, in those subject to mental disease. Gastric dilatation and atrophy of the stomach wall occur in a fairly large number of cases; and, back of the mere disorder of the membranes, is a striking deficiency in the lymphatic apparatus. This has been studied more especially by Dr. H. M. Adler during his service as pathologist to the Danvers State Hospital. An index to this lymphatic deficiency is afforded by the small size of the spleen characteristic of the insane, to which Dr. Adler has given a statistical form.

Perhaps Dr. Adler might say a few words about some peculiar effects of overfeeding with fat in certain cases. In the newspapers of late we have heard more about underfeeding than overfeeding. It is salutary for us to consider that these problems are not entirely problems of dollars and cents.

Dr. Everett Flood, superintendent, Monson State Hospital: — I have brought some copies of our more recent diets from the institution, and I will pass them around for the purpose, not of showing their excellence, but of seeing if I can have suggestions as to their weaknesses. This time of the year, of course, makes a little difference in the dietaries. For instance, there is less milk at this time of the year, and fewer eggs. In

one of the dietaries it appears that hash was very popular in one dining room for five days in a week. I do not know how to account for that, but it happened to be that way.

The question of diet for anybody is always of great importance to the individual, and often reason is less in evidence in settling it than emotion. Even the most rational of us are loth to believe that our mothers' cooking was not better than that of our wives'. You may hear complaints of the food at the best hotels. A high-salaried chef does not shut out this probability. It appears that the natural traits as to matters of food manifest themselves in the mental cases in about the same way that they do in the normal person. Defects of mind short of dementia of a high degree do not prevent the individual from being particular or peculiar as to his food. These complaints are probably more frequent among the insane and neurasthenic than among the more normal, but the difference is not so very great. Insane persons complain with less reason and of more trivial things, but the actual number of complaints seems about as many from employees as from patients.

I am asked to speak especially of the diet of epileptic persons. A great variety of methods have been adopted with small groups of patients. A meatless diet; a vegetable diet; a diminished amount; a full amount; three meals a day; five meals a day; warm drink before getting out of bed; warm drink on retiring; a diet free from salt to a considerable degree with water; a diet with a moderate amount of meat or vegetables; well-masticated meals; milk wholly or in part; and other modifications have been tested with varying success. I may say that in general the mixed diet has been the most satisfactory to the average patient.

In certain cases milk, or bread and milk, has been found to be the rational diet. Any deviation from this always proves a mistake. I have many times tried to introduce a portion of broth or a bit of meat, toast and sauce, or some other modification of a simple nature for the purpose of variety. Such a change has always done harm. When a patient has been found to do well on bread and milk, and makes no complaint of the sameness, it is best to continue indefinitely in the same course.

This diet administered in moderate quantities, sometimes with the addition of raw egg, or bread and butter, and at intervals of three hours, will furnish ample nourishment. For the cases who are capable of choosing, a diet of ordinary food will be best. Working patients are not injured by any well-cooked food. We have patients who do not like tripe. We have some who ask for it if it is not served. To suit both classes it has become a custom to serve a soft tripe and a side dish of well-baked beans. This may seem undesirable for epileptics. We have not found it so. Baked beans if well cooked are well borne by all out-of-door workers, and they are demanded by them. In the same way a moderate amount of meat is required. We serve meat as the major part of every dinner, except when fish is used in its stead. There is also a meat breakfast with potatoes and gravy, the amount of meat being less than at noon. The supper is always light, as a heavy supper has bad effects on the number of attacks. We serve a glass of milk to each patient at the morning and evening meal, in addition to the rest of the meal. This can be done during almost the entire year. We are making efforts to keep cows enough so as to keep up the supply for all seasons. Nourishment is an important part of the care of epileptics. They are inclined to loss of weight unless the diet is generous.

Even with a hearty appetite and full meals the tendency is to leanness. Out of a hundred patients taken as they are met, I find, however, that 12 are decidedly fat, and that nearly half are plump or fat. Among normal people we generally meet 10 fat persons to 160 fat or plump ones.

The experience in our hospital as to diet is like that at the Bethel Colony in Germany, and like that at Craig Colony in New York. I feel pretty sure that our present plan is well grounded, as complaints have been at a minimum for a long time.

Herman M. Adler, M.D., chief of staff, Psychopathic Department, Boston State Hospital:—As long as Dr. Southard has brought up the question of overfeeding, I thought perhaps you would like to hear the experiences and observations on which these remarks were based. The statement that Atwater

published in 1901, that there was no diet peculiar to mental disease, is a perfectly correct one. If you conceive of the amount of substance in the nervous system involved in the disease, and compare it to the mass of other organs, it is so far overshadowed that the result of the disease must be lost in the mass of material thrown off by other organs. On a conservative estimate, the functional substance of the cortex of the brain would amount to about 15 grams of material; that is, compared to some 70 kilograms of the body. Now the chief disturbances to the metabolism may be hard or almost impossible to locate by even the extremely accurate methods of Atwater and Benedict, and there are nowadays a number of facts which were unknown at the time of this publication. These facts have to do with the production of such diseases as anæmia; have to do with such conditions as mentioned here to-day, — loss of weight in patients who are suffering with depressive psychosis, which loss of weight is converted into gain when the psychosis improves. This change in weight cannot be attributed directly to the disease. It accompanies the disease, and it is therefore certainly a significant point and has a bearing on the general question of insanity. I found in examining some cases at Danvers State Hospital and some patients at the Psychopathic Hospital that we were able to reduce the rate of these losses in certain cases. These cases seemed to be when patients, a little bit advanced in years, perhaps, had signs of arterio sclerosis, in whom part of the mental disease was due to arterio sclerosis, and in these cases we were able to accomplish results by cutting down the amount of fat in their food. This was based on experience we had at Danvers, where we took a number of patients suffering with this sort of trouble and fed them with rich milk and cream in large quantities to see if we would be able to fatten them up. The result in these cases was the opposite. Not one of them appeared to gain, but showed some loss of weight, although they were rather emaciated at the time, and in addition showed increasing anæmia, destruction of the red blood cells. Anæmia is one of the common findings in insane patients, and seems to continue, even irrespective of the ordinary treatment which succeeds under otherwise healthy

conditions. It was thought that the fat, therefore, in the food should be reduced, and on the basis of this work, and on results observed in certain cases, experiments were started with rabbits. The rabbit was chosen because the rabbit is an animal which feeds largely on vegetables, and in the ordinary vegetable diet the amount of fat present is very small in proportion to other ingredients; therefore it was thought that it would be easier to overfeed these animals with fat, — intoxicate them with fat. Every one of these rabbits, about 25, showed extreme emaciation and showed extreme anæmia, in several instances to the degree known as pernicious anæmia, but this was only after very prolonged treatment. A few of the rabbits died very suddenly, due to what seemed to be acute fat intoxication, accompanied by intestinal disturbance. Others were not poisoned acutely, but showed no symptoms for months and then showed them, — emaciation and loss of weight. Finally, at autopsy after death it was found that there was not a shred of fat to be seen anywhere, neither under the skin nor in the abdominal cavity.

This has a significance for us because it seems that a good many of the patients we have to keep are deficient in their ability to handle these fats, so that what would be a pretty healthy diet for a normal person, or for a person in a lumber camp in winter, might be an absolutely harmful diet for an individual indoors in an institution and suffering with some other ailment, and this harmfulness of the diet would not appear in a week or two weeks, but might appear only after a very long time. We are dealing with chronic diseases, and the changes in chronic diseases are very slow and cannot be estimated only after a long time. The food value, as shown by the fuel value, does not determine whether such food is good or bad for the individual. On the other hand, it is the only index we have as to the state of the individual. We cannot tell ahead what diet is going to be good for patients. It may be good for ninety-nine out of a hundred, but the other one will die. We must adapt the diet to the patients. It is perfectly possible, under such conditions as those under which we are working, to do this, but we need more definite information about the

rôle which these substances play, information which we hope to get in the future.

Dr. Charles E. Thompson, executive officer, State Board of Insanity:— I have been listening to hear something said of studies made as to the calorific value of foods.

The tendency to-day is, I believe, to study our diets to see what each person is receiving, not only in variety of food, but in calories. There are here (demonstrated) charts which I have brought in to show the method of studying the calorific values of food and the composition of various foodstuffs. These can be obtained by writing to the Department of Agriculture, Washington, D. C.

I have been particularly interested in the analysis of foodstuffs, and several years ago, realizing that the diets of patients in one of our institutions were low compared to some others, I had an assistant physician study the calorific value of these diets, and found that while the diets supplied were plain compared with some other hospitals, they obtained a sufficient number of calories, usually exceeding the number required per person as shown in the tables prepared by Professor Atwater.

It seems to me that in all of our hospitals studies of this kind could well be made, either by an assistant physician or by some special person. This would not require an analytical study in the laboratory, but a careful study of the foodstuffs furnished each dining room, accepting Professor Atwater's table as to the calorific value of these.

To sum up, it seems to me that to have our diets satisfactory and sufficient we should not only look after the quality and service of food, but the calorific value of the same as well.

Dr. H. Louis Stick, superintendent, Worcester State Asylum:— I would like to add a little to what Dr. Thompson has said. I have just read a résumé of the work done in France along this line of dietetics in an investigation of over 5,000 cases, and these were taken from all classes of people,— the well-to-do, the middle class and the lower class, and, of course, the very lowest class. It was found that about 97 per cent. of proteins, 58 of fats and 418 carbohydrates were being used, giving an energy value in calories of 2,500. I have made an

analysis of our dietary and have found that it is just a little higher than that, — about 2,600 calories. If you will allow me to read a few figures: —

Food per Day per Patient in France.

Vegetable diet: —	Grams.
Bread,	420
Green vegetables,	250
Cereals,	40
Potatoes,	100
Sugar,	40
Fresh fruit,	70
Alcoholic beverages,	932
From animal sources: —	
Meat,	200
Eggs,	24
Cheese,	8
Butter and oils,	28
Milk,	213
Salt,	20
Water,	950

FINANCIAL STATISTICS.

TABLE 1. — *Balance Sheet.*

Inventory, Nov. 30, 1912,	\$15,429,499 83	Inventory, Nov. 30, 1913,	\$16,168,009 68
Unexpended balance of special appropriations, .	1,004,454 88	Unexpended balance of special appropriations, .	1,304,488 36
Accounts receivable, .	64,904 60	Unexpended balance of maintenance appropriation reverting to State treasury, .	14,653 63
Private funds, .	67,924 91	Accounts receivable, .	57,665 67
Total resources,	\$16,566,784 22	Private funds,	72,202 36
Net increase in value of property, .	830,635 09	Total resources,	\$17,617,019 70
Maintenance appropriations granted, .	3,402,283 19	Net depreciation in value of property, .	95,086 72
Special appropriations granted, .	1,212,325 00	Expenditures from maintenance appropriations, .	3,357,629 56
Receipts from all sources except State Treasurer, .	402,794 24	Expenditures from special appropriations, .	910,168 19
Aggregate, .	\$22,414,821 74	Unexpended balances of special appropriations reverting to State treasury, .	2,123 33
		Money received and remitted to State treasury, .	402,794 24
		Aggregate, .	\$22,414,821 74

TABLE 2.—*Financial Summary for the Year ending Nov. 30, 1913.*

INSTITUTIONS.	RESOURCES Nov. 30, 1913.				
	Inventory.	Unexpended Balance of Special Appropriations.	Unexpended Balance of Maintenance Appropriations reverting to State Treasury.	Accounts Receivable.	Private Funds.
The insane:—					Total Resources.
State hospitals:—					
Worcester,	\$2,196,371.05	\$28,741.13	\$0.95	\$10,867.79	\$2,244,953.52
Taunton,	920,877.93	17,919.12	71.48	7,373.31	94,741.92
Northampton,	1,029,544.09	3,930.47	49.46	14,651.08	1,048,934.40
Danvers,	1,841,004.64	—	148.58	2,313.59	1,843,466.81
Westborough,	1,009,712.47	78,526.67	92.25	3,881.15	1,005,847.85
Boston, ¹	2,399,205.95	303,040.04	212.61	9,027.83	2,711,486.43
Totals,	\$9,396,716.13	\$432,157.51	\$575.23	\$48,614.75	\$9,891,430.93
State asylums:—					
Worcester,	\$1,493,451.19	\$447,254.00	\$88.69	\$934.50	\$1,941,728.38
Medfield,	1,784,223.00	1,220.50	19.63	—	1,785,463.13
Gardner Colony,	656,284.63	4,779.11	5.82	—	661,069.56
Totals,	\$3,933,956.82	\$433,253.61	\$114.14	\$934.50	—
Totals, hospitals and asylums,	\$13,330,674.95	\$885,411.12	\$689.37	\$49,549.25	\$13,367.31
Miscellaneous:—					
Monson Hospital,	\$829,680.85	\$126,428.21	\$5,443.24	\$447.40	\$961,999.70
Foxborough Hospital,	355,988.17	—	339.17	—	357,035.46
School for the Feeble-minded at Waltham,	1,127,403.07	—	3,855.27	—	1,106,918.64
Wrentham School,	534,262.64	292,649.03	4,323.53	133.65	821,373.90
Totals,	\$2,837,334.73	\$419,077.24	\$13,964.26	\$8,116.42	\$3,337,327.70
Totals, hospitals, asylums and miscellaneous,	\$16,168,099.68	\$1,304,488.36	\$14,653.63	\$57,665.67	\$72,292.36
					\$17,617,019.70

¹ Includes Psychopathic Department.

TABLE 2.—*Financial Summary for the Year ending Nov. 30, 1913—Continued.*

INSTITUTIONS.	Net Resources during the Year.	EXPENDITURES.		Unexpected Balances of Appropriations reverting to State Treasury.	Money remitted to State Treasury from Receipts.	Aggregate.
		Maintenance Appropriations.	Special Appropriations.			
The insane:—						
State hospitals:—						
Worcester,	\$68,996 24	\$335,249 15	\$66,306 11	\$1 56	\$65,130 52	\$2,711,639 30
Taunton,		186,298 52	44,185 12	479 71	36,676 01	1,368,829 37
Northampton,		186,150 54	17,676 08	611 54	51,665 75	1,304,906 48
Danvers,	12,466 05	354,451 42	5,446 26		59,069 68	2,275,511 76
Westborough,	13,624 43	322,257 75	14,914 14	71 99	80,143 40	1,526,859 56
Boston, 1		404,287 39	347,578 89	693 10	42,255 17	3,506,300 98
Totals,	\$95,086 72	\$1,874,624 77	\$496,106 60	\$1,857 90	\$334,940 53	\$12,694,047 45
State asylums:—						
Worcester,	—	\$390,811 31	\$213,643 49	\$1 72	\$10,612 36	\$2,456,797 26
Medfield,	—	357,578 37	12,563 81	2 52	14,171 41	2,169,779 24
Gardner Colony,	—	141,494 18	17,326 57	108 65	2,812 55	822,811 51
Totals,	—	\$789,883 86	\$243,553 87	\$112 89	\$27,596 32	\$5,449,388 01
Totals, hospitals and asylums,						
\$95,086 72	\$2,664,508 63	\$739,640 47	\$1,970 79	\$16,307 78	\$302,556 85	\$18,143,435 46
Miscellaneous:—						
Monson Hospital,	—	\$229,091 06	\$14,221 76	—	4,391 97	\$1,221,620 30
Foxborough Hospital,	—	103,160 83	—	—	18,443 41	494,588 26
School for the Feeble-minded at Waltham,	—	299,962 62	32,006 32	\$149 50	1,547,480 49	
Wrentham School,	—	90,906 42	124,269 64	3 04	1,114 23	1,037,697 23
Totals,	—	\$723,120 93	\$170,557 72	\$152 54	\$40,257 39	\$4,271,386 28
Totals, hospitals, asylums and miscellaneous,	\$95,086 72	\$3,387,629 56	\$910,168 19	\$2,123 33	\$402,794 24	\$22,414,821 74

¹ Includes Psychopathic Department.

TABLE 2. — *Financial Summary for the Year ending Nov. 30, 1913 — Continued.*

INSTITUTIONS.	RESOURCES Nov. 30, 1912.				Total Resources.
	Inventory.	Unexpended Balance of Special Appropriations.	Accounts Receivable.	Private Funds.	
The insane: —					
State hospitals: —					
Worcester,	\$2,120,772 12	\$65,972 24	\$10,338 28	\$8,996 18	\$2,206,678 32
Taunton,	988,169 59	62,105 88	9,577 89	—	1,059,853 36
Northampton,	1,018,383 00	12,086 26	11,971 18	729 84	1,043,170 28
Danvers,	1,847,897 16	6,057 80	7,887 12	—	1,861,842 08
Westborough,	1,025,190 53	6,262 80	5,662 83	—	1,037,116 16
Boston, t	2,193,065 22	208,312 03	9,163 51	—	2,412,540 76
Totals,	\$9,195,477 62	\$360,797 01	\$55,200 81	\$9,726 02	\$9,621,201 46
State asylums: —					
Worcester,	\$1,246,609 03	\$452,399 21	\$904 55	—	\$1,700,002 70
Medfield,	1,742,289 30	15,786 83	1,276 90	—	1,757,353 03
Gardner Colony,	623,241 86	10,214 33	—	—	633,456 19
Totals,	\$3,612,140 19	\$476,400 37	\$2,271 45	—	\$4,090,812 01
Totals, hospitals and asylums,	\$12,807,617 81	\$837,197 38	\$57,472 26	\$9,726 02	\$13,712,013 47
Miscellaneous: —					
Monson Hospital,	\$823,625 80	\$10,649 97	\$468 56	—	\$834,744 33
Foxborough Hospital,	349,250 88	—	479 11	—	349,759 99
School for the Feeble-minded at Waltham,	1,019,398 62	32,155 82	6,314 32	\$58,198 89	1,116,067 05
Wrentham School,	429,576 72	124,451 71	170 35	—	554,198 78
Totals,	\$2,621,882 02	\$167,257 50	\$7,432 34	\$58,198 89	\$2,854,770 75
Totals, hospitals, asylums and miscellaneous,	\$15,429,499 83	\$1,004,454 88	\$64,904 60	\$67,924 91	\$16,566,784 22

¹ Includes Psychopathic Department.

TABLE 2. — *Financial Summary for the Year ending Nov. 30, 1913 — Concluded*

INSTITUTIONS.	Net Increase in Valuation.	APPROPRIATIONS.		Receipts from All Sources except State Treasurer.	Aggregate.
		Maintenance.	Special.		
The insane: —					
State hospitals: —					
Worcester,	\$75,504.96	\$335,250.00	\$29,075.00	\$65,130.52	\$2,711,639.30
Taunton,	—	272,300.00	—	36,676.01	1,368,329.37
Northampton,	13,870.45	186,200.00	10,000.00	51,665.75	1,304,906.48
Danvers,	—	354,600.00	—	59,069.63	2,275,511.76
Westborough,	—	322,350.00	87,250.00	80,143.40	1,526,859.56
Boston, ¹	204,005.05	494,500.00	443,000.00	42,255.17	3,506,300.98
Totals,	\$293,380.46	\$1,875,200.00	\$569,235.00	\$334,940.53	\$12,694,047.45
State asylums: —					
Worcester,	\$246,782.11	\$290,900.00	\$208,500.00	\$10,612.36	\$2,456,797.26
Medfield,	40,636.80	357,598.00	—	14,171.41	2,169,779.24
Gardner Colony,	33,042.77	141,500.00	12,000.00	2,812.55	822,811.51
Totals,	\$320,481.68	\$789,998.00	\$220,500.00	\$27,596.32	\$5,449,358.01
Totals, hospitals and asylums,	\$613,862.14	\$2,665,198.00	\$789,525.00	\$392,536.85	\$18,143,435.46
Miscellaneous: —					
Monson Hospital,	\$6,033.88	\$234,534.30	\$130,000.00	\$16,307.78	\$1,221,020.30
Foxborough Hospital,	6,936.30	103,500.00	—	4,391.97	464,588.26
School for the Feeble-minded at Waltham,	109,148.54	303,820.89	—	18,443.41	1,547,450.49
Wrentham School,	94,654.22	95,230.60	\$292,500.00	1,114.23	1,037,897.23
Totals,	\$216,772.95	\$737,085.19	\$422,500.00	\$40,257.39	\$4,271,356.28
Totals, hospitals, asylums and miscellaneous,	\$830,635.09	\$3,402,283.19	\$1,212,325.00	\$402,794.24	\$22,414,821.74

¹ Includes Psychopathic Department.

TABLE 3.—*Inventory of State Institutions, Nov. 30, 1913.*

INSTITUTIONS.	REAL ESTATE.							
	LAND.				TILLAGE.			
	GROUNDS AND BUILD- ING SITES.		WOODLAND.		MOWING.		MOWING.	
	Acre.	Value.	Acre.	Value.	Acre.	Value.	Acre.	Value.
The insane:—								
State hospitals:—								
Worcester, —	137	\$247,440.00	182	\$13,560.00	149	\$22,350.00	195	\$163,500.00
Taunton, —	26	6,500.00	50	10,000.00	—	23,248.50	50	7,500.00
Northampton, —	23	4,861.20	93	19,655.55	110	26,000.00	100	21,135.00
Danvers, —	26	30,000.00	40	1,600.00	176	647.00	79	11,250.00
Westborough, —	50	10,000.00	193	9,646.50	43	22,228.00	647	22,228.00
Boston, —	12	109,519.00	5	2,200.00	115	211,700.00	69	117,500.00
Totals, —	274	\$408,320.20	563	\$56,662.05	593	\$283,945.50	740	\$343,113.00
State asylums:—								
Worcester, —	11	\$193,800.00	372	\$9,750.00	201	\$8,041.60	140	\$5,600.00
Medfield, —	75	40,000.00	233	2,876.39	54	1,312.20	63	1,530.80
Gardner Colony, —	29	1,450.00	608	12,150.20	74	2,607.50	116	7,660.34
Totals, —	115	\$235,250.00	1,213	\$24,776.59	329	\$11,961.30	319	\$14,791.14
Totals, hospitals and asylums, —	389	\$643,570.20	1,776	\$81,436.64	922	\$295,906.80	1,059	\$557,904.14
Miscellaneous:—								
Monson Hospital, —	50	\$4,875.00	287	\$5,773.00	90	\$8,655.00	69	\$6,850.00
Foxborough Hospital, —	21	6,220.00	20	4,100.00	3	700.00	38	7,750.00
School for the Feeble-minded at Waltham, —	54	16,953.00	1,430	28,143.00	306	25,806.00	—	—
Wrentham School, —	25	5,000.00	220	13,200.00	35	3,500.00	50	3,000.00
Totals, —	150	\$33,048.00	1,957	\$51,216.00	434	\$38,661.00	157	\$17,600.00
Totals, hospitals, asylums and miscellaneous, —	539	\$676,618.20	3,733	\$132,634.64	1,356	\$334,567.80	1,216	\$375,504.14
Mental wards, State Infirmary, —	—	—	—	—	—	—	—	—
Bridgewater Hospital, —	—	—	—	—	—	—	—	—
Totals, —	539	\$676,618.20	3,733	\$132,634.64	1,356	\$334,567.80	1,216	\$375,504.14
Aggregates, —	—	—	—	—	—	—	—	—

1 Includes Psychopathic Department.

TABLE 3.—*Inventory of State Institutions, Nov. 30, 1913—Continued.*

INSTITUTIONS.	REAL ESTATE — Con.		
	LAND — Con.		TOTAL.
	PASTURE.	MISCELLANEOUS.	
	Acres.	Value.	Acres.
The insane:—			Value.
State hospitals:—			
Worcester,	64	\$2,580 00	578
Taunton,	58	7,250 00	333
Northampton,	185	39,099 75	511
Danvers,	188	4,750 00	509
Westborough,	194	5,832 60	763
Boston, ¹	17	5,320 00	4,340 00
Totals,	706	\$64,832 35	52
State asylums:—			
Worcester,	194	\$4,278 34	—
Medfield,	16	400 00	—
Gardner Colony,	581	5,812 50	200
Totals,	791	\$10,490 84	200
Totals, hospitals and asylums,	1,497	\$75,323 19	252
Miscellaneous:—			
Monsor Hospital,	181	\$5,659 00	10
Foxborough Hospital,	21	3,260 00	—
School for the People-minded at Waltham,	184	2,510 00	—
Wrentham School,	165	8,250 00	—
Totals,	551	\$19,679 00	10
Totals, hospitals, asylums and miscellaneous,	2,048	\$95,002 19	262
Mental wards, State Infirmary,	—	—	—
Bridgewater Hospital,	—	—	—
Totals,	2,048	\$95,002 19	262
Aggregates,			

¹ Includes Psychopathic Department.

TABLE 3.—*Inventory of State Institutions, Nov. 30, 1913—Continued.*

INSTITUTIONS.	REAL ESTATE — Con.				
	PATIENTS.	NURSES.	FARM, STABLE AND GROUNDS.	MISCELLANEOUS.	TOTAL.
BUILDINGS.					
The insane: —					
State hospitals: —					
Worcester, —					
Taunton, —					
Northampton, —					
Danvers, —					
Westborough, —					
Boston, —					
Totals, —					
State asylums: —					
Worcester, —					
Medfield, —					
Gardner Colony, —					
Totals, —					
Totals, hospitals and asylums, —					
Miscellaneous: —					
Monson Hospital, —					
Foxborough Hospital, —					
School for the Feeble-minded at Waltham, —					
Wrentham School, —					
Totals, —					
Totals, hospitals, asylums and miscellaneous, —					
Mental wards, State Infirmary, —					
Bridgewater Hospital, —					
Totals, —					
Aggregates, —					

¹ Includes Psychopathic Department.

TABLE 3.—*Inventory of State Institutions, Nov. 30, 1913*—Continued.

INSTITUTIONS.	REAL ESTATE — Con.				Aggregate.
	Water System and Appurtenances.	Drainage System and Appurtenances.	BETTERMENTS.	Heating and Lighting System and Appurtenances.	
				Miscellaneous.	Total.
The insane: —					
State hospitals: —					
Worcester, —	\$99,862 86	\$126,423 32	\$29,889 31	\$256,175 49	\$2,020,897 27
Taunton, —	44,986 78	57,441 37	83 60	120,938 06	77,448 06
Northampton, —	25,646 80	35,601 25	163,904 75	246,502 80	922,259 05
Danvers, —	21,148 44	72,940 05	—	94,888 49	1,694,488 49
Westborough, —	98,125 00	63,643 00	4,480 00	201,237 00	818,057 00
Boston, ² —	—	—	—	422,700 44	2,511,747 54
Totals, —	\$289,769 88	\$68,037 31	\$362,048 99	\$199,105 66	\$1,341,662 28
State asylums: —					
Worcester, —	\$29,100 00	\$19,145 00	\$149,615 00	\$123,136 05	\$190,966 05
Medfield, —	—	—	—	192,205 47	192,205 47
Gardner Colony, —	36,716 76	20,539 54	30,089 29	91,814 53	179,160 12
Totals, —	\$65,816 76	\$39,684 54	\$49,704 29	\$407,156 05	\$562,361 64
Totals, hospitals and asylums, —	\$355,586 64	\$107,721 85	\$411,753 28	\$606,261 71	\$1,904,023 92
Miscellaneous: —					
Monson Hospital, —	\$25,500 00	\$26,303 27	\$1,050 00	\$150,823 85	\$203,677 12
Bridgwater Hospital, —	8,093 91	11,206 14	14,056 53	64,370 46	297,719 77
School for the Feeble-minded at Waltham, —	22,684 54	—	—	217,307 18	902,636 93
Wrentham School, —	13,644 20	—	29,875 07	5,486 00	71,680 81
Totals, hospitals, asylums and miscellaneous, —	\$46,278 45	\$51,153 61	\$44,981 60	\$437,987 49	\$464,452 07
Totals, hospitals, asylums and miscellaneous, —	\$41,865 09	\$158,875 46	\$456,734 88	\$1,014,249 20	\$2,494,452 07
Mental wards, State Infirmary, —	—	—	—	\$43,651 86	\$44,626 68
Bridgwater Hospital, —	—	—	—	32,515 53	408,555 27
Totals, Aggregates, —	\$41,865 09	\$158,875 46	\$456,734 88	\$1,009,416 59	\$853,181 95
					\$15,272,379 94

• Includes drainage

² Includes Psychopathic Department.

TABLE 3.—*Inventory of State Institutions, Nov. 30, 1913*—Continued.

INSTITUTIONS.	PERSONAL PROPERTY.					
	PROVISIONS AND GROCERIES.			CLOTHING AND CLOTHING MATERIAL.		
	Amount.	Increase.	Amount.	Increase.	Amount.	Increase.
The insane:—						
State hospitals:—						
Worcester,						
Taunton,						
Northampton,						
Danvers,						
Westborough,						
Boston, ²						
Totals,						
State asylums:—						
Worcester,						
Medfield,						
Gardner Colony,						
Totals,						
Totals, hospitals and asylums,						
Miscellaneous:—						
Monson Hospital,						
Foxborough Hospital,						
School for the Feeble-minded at Waltham,						
Wrentham School,						
Totals, hospitals, asylums and miscellaneous,						
Mental wards, State Infirmary,						
Bridgewater Hospital,						
Totals, Aggregates,						

¹ Decrease.² Includes Psychopathie Department.

TABLE 3.—*Inventory of State Institutions, Nov. 30, 1913*—Continued.

INSTITUTIONS.	PERSONAL PROPERTY—CON					
	HEAT, LIGHT AND POWER.		REPAIRS AND IMPROVEMENTS.		FARM, STABLE AND GROUNDS.	
	Amount.	Increase.	Amount.	Increase.	Amount.	Increase.
The insane:—						
State hospitals:—						
Worcester,	\$3,943 42		\$525 01		\$45,167 36	\$2,393 94
Taunton,	4,773 79	1,561 36	4,528 68	278 70	1,784 10	1,175 55
Northampton,	11,48	11,48	4,191 45	278 27	43,511 77	47 151
Danvers,	513 18	1,961 82	22,769 72	43 93	26,884 26	2,069 52
Westborough,	3,039 50	992 40	6,672 05	4,777 27	31,809 73	7,653 26
Boston, ²	1,031 51	607 50	4,185 01	1,607 52	15,213 13	5,909 59
Totals,	\$13,312 88	\$3,371 79	\$48,956 67	\$2,555 30	\$190,431 35	\$10,322 09
State asylums:—						
Worcester,	\$11,088 26	\$594 94	\$15,125 90	\$3,288 79	\$12,239 20	\$14,502 66
Medfield,	14,579 93	8,385 77	3,859 00	779 91	56,989 96	9,549 43
Gardner Colony,	4,900 24	4,519 53	6,629 85	2,218 54	26,806 44	3,490 06
Totals,	\$30,568 43	\$12,310 36	\$25,614 75	\$1,850 16	\$86,055 60	\$8,503 29
Totals, hospitals and asylums,	\$43,881 31	\$8,938 57	\$74,571 42	\$705 14	\$236,466 95	\$18,825 38
Miscellaneous:—						
Monson Hospital,	\$10,550 49	\$9,626 94	\$6,147 37	\$3,971 17	\$26,924 55	\$1,796 01
Foxborough Hospital,	1,140 85	841 74	7,516 95	697 08	13,933 40	1,206 90
School for the Feeble-minded at Waltham,	13,147 88	2,450 75	3,805 17	2,163 69	42,990 05	1,658 58
Wrentham School,	4,440 23	336 35	1,804 01	61 66	10,503 21	32 61
Totals,	\$29,279 45	\$11,572 90	\$19,273 50	\$6,770 28	\$94,371 21	\$1,016 86
Totals, hospitals, asylums and miscellaneous,	\$73,160 76	\$20,511 47	\$93,344 92	\$6,065 14	\$380,838 16	\$17,808 52
Mental wards, State Infirmary,	\$6,723 54	\$2,478 69	\$5,845 23	\$7,658 10	\$12,904 33	\$939 99
Bridgewater Hospital,	6,739 71	1,660 86	15,004 56	2,221 02	27,638 28	3,008 75
Totals,	\$13,523 25	\$4,139 54	\$20,849 79	\$5,337 08	\$40,542 61	\$2,048 76
Aggregates,	\$86,684 01	\$24,651 01	\$114,694 71	\$728 06	\$421,380 77	\$15,739 76

¹ Decrease.² Includes Psychopathic Department.

TABLE 3.—*Inventory of State Institutions, Nov. 30, 1913*—Continued.

INSTITUTIONS.	REAL AND PERSONAL PROPERTY.				TOTAL VALUATION OF REAL PROPERTY.	
	MISCELLANEOUS.		TOTAL VALUATION OF PERSONAL PROPERTY.			
	AMOUNT.	INCREASE.	AMOUNT.	INCREASE.		
The Insane:—						
State hospitals:—						
Worcester, ¹	\$12,240	58	\$2,572	97	\$175,673	78
Taunton, ¹	6,096	31	2,781	38	143,429	87
Northampton, ¹	2,405	68	1,156	71	107,285	91
Danvers, ¹	9,377	59	1,598	70	146,516	15
Westborough, ¹	10,124	25	5,410	72	141,655	47
Boston, ²	23,725	17	10,742	88	147,458	41
Totals,	\$63,089	58	\$9,092	84	\$862,018	72
State asylums:—						
Worcester, ¹	\$7,736	06	\$2,332	80	\$131,294	15
Medfield, ¹	4,835	30	1,197	35	168,319	20
Gardner Colony, ¹	7,335	09	1,015	09	103,155	66
Totals,	\$19,906	45	\$3,445	24	\$402,679	91
Totals, hospitals and asylums,	\$83,886	03	\$12,538	08	\$1,264,697	73
Miscellaneous:—						
Monson Hospital, ¹	\$10,675	85	\$1,246	61	\$141,270	17
Foxborough Hospital, ¹	5,731	38	2,156	91	58,268	40
School for the Feeble-minded at Waltham, ¹	0,562	28	3,143	38	165,931	09
Wrentham School, ¹	4,757	02	301	88	59,809	25
Totals,	\$30,726	63	\$6,245	02	\$125,278	91
Totals, hospitals, asylums and miscellaneous, ¹	\$114,622	56	\$18,733	10	\$1,689,976	64
Mental wards, State Infirmary, ¹	\$9,428	89	\$3,019	82	\$77,860	46
Bridgewater Hospital, ¹	5,884	59	2,490	06	118,233	46
Totals,	\$15,513	48	\$5,509	88	\$196,094	30
Aggregates,	\$130,136	04	\$24,292	98	\$1,886,070	94
					\$83,875	64

² Includes Psychopathic Department.¹ Decrease.² Includes Psychopathic Department.

TABLE 3.—*Inventory of State Institutions, Nov. 30, 1913*—Concluded.

INSTITUTIONS.	REAL AND PERSONAL PROPERTY — Con.					
	TOTAL REAL AND PERSONAL.			PRIVATE FUNDS.		
	Amount.	Increase.	Amount.	Increase.	Amount.	Increase.
The insane:—						
State hospitals:—						
Worcester,	\$2,196,371.05		\$75,598.93		\$23.48 ¹	
Taunton,	920,377.93	67,291.66 ¹	759.30	29.46	920,343.75	\$75,575.45
Northampton,	1,020,344.09	11,161.00	—	—	1,030,303.39	67,291.66 ¹
Danvers,	1,841,004.64	6,892.32 ¹	—	—	1,841,004.64	11,190.55
Westborough,	1,008,712.47	15,478.06 ¹	—	—	1,008,712.47	6,892.32 ¹
Boston, ²	2,399,205.95	204,140.73	—	—	2,399,205.95	15,478.06 ¹
Totals,	\$9,396,716.13	\$201,238.51	\$9,732.00	\$5.98	\$9,406,448.13	\$201,214.49
State asylums:—						
Worcester,	\$1,493,451.19	\$246,842.16	—	—	\$1,493,451.19	\$246,842.16
Medfield,	1,784,233.00	41,933.70	—	—	1,784,223.00	41,933.70
Gardner Colony,	656,284.63	35,042.77	—	—	656,284.63	33,042.77
Totals,	\$3,933,958.82	\$321,818.63	—	—	\$3,933,958.82	\$321,818.63
Totals, hospitals and asylums,	\$13,350,674.95	\$523,057.14	\$9,732.00	\$5.98	\$13,340,406.95	\$523,063.12
Miscellaneous:—						
Monson Hospital,	\$829,680.85	\$6,055.05	—	—	\$829,680.85	\$6,055.05
Foxborough Hospital,	355,988.17	6,707.29	—	—	355,988.17	6,707.29
School for the Feeble-minded at Waltham,	1,065,368.02	49,169.40	\$58,835.05	\$636.16	1,127,463.07	49,805.56
Wrentham School,	524,262.64	91,685.92	—	—	524,262.64	94,685.92
Totals, hospitals, asylums and miscellaneous,	\$2,778,499.68	\$156,617.66	\$58,835.05	\$636.16	\$2,837,334.73	\$157,253.82
\$16,169,174.63	\$679,674.80	\$68,567.05	\$642.14	\$642.14	\$16,177,741.68	\$680,316.94
\$522,487.14	\$9,181.53 ¹	—	—	—	\$522,487.14	\$9,181.53 ¹
524,789.11	30,062.35	—	—	—	526,789.11	30,062.35
\$1,049,276.25 ²	\$20,880.77	—	—	—	\$1,049,276.25	\$20,880.77
\$17,153,450.88	\$700,555.57	\$68,567.05	\$642.14	\$642.14	\$17,227,017.93	\$701,197.71

¹ Decrease.² Includes Psychopathic Department.

TABLE 4.—*Receipts of State Institutions during the Fiscal Year ending Nov. 30, 1913 (available for Maintenance the Following Year under Section 2, Chapter 175, Acts of 1905).*

STATE BOARD OF INSANITY

[Jan.]

11 Includes Psychopathic Behavior

2 Hospital has included check of November, 1912, which support department included in last year's receipts.

TABLE 4. — *Receipts of State Institutions during the Fiscal Year ending Nov. 30, 1913, etc. — Concluded.*

INSTITUTIONS.	RECEIPTS ON ACCOUNT OF SALES OR REFUNDS — Con.					Miscella- neous.	Total Receipts.
	Heat, Light and Power.	Repairs and Improve- ments.	Farm, Stable and Grounds.	Sundries.	Total Sales or Refunds.		
The insane: —							
State hospitals: —							
Worcester, —	\$3 70	\$92 83	\$873 86	\$72 43	\$2,034 01	\$1,189 09	\$65,130 52
Taunton, —	30	110 19	182 94	76 53	983 57	975 20	36,676 01
Northampton, —	70 79	80 00	1,884 30	127 13	2,600 77	205 44	51,665 75
Danvers, —	30 37	421 96	1,079 83	210 48	2,848 52	683 64	59,069 68
Westborough, —	—	18 25	512 33	347 31	1,960 64	741 51	80,143 40
Boston, 1 —	19 71	1,023 68	554 35	—	2,256 84	627 06	42,255 17
Totals, —	\$124 87	\$1,749 91	\$5,037 61	\$833 88	\$12,684 35	\$4,421 94	\$334,940 53
State asylums: —							
Worcester, —							
Medfield, —	\$44 70	817 09	\$1,374 37	\$243 98	\$2,261 56	\$283 21	\$10,612 36
Gardner Colony, —	44 39	35 64	841 25	57 15	1,298 18	530 87	14,171 41
Totals, —	\$89 09	130 65	528 13	82 48	1,200 07	570 77	2,812 55
Totals, hospitals and asylums, —	\$813 96	\$1,933 29	\$2,743 75	\$333 61	\$4,754 81	\$1,334 85	
Totals, hospitals and asylums, —	\$813 96	\$1,933 29	\$7,781 36	\$1,217 49	\$17,439 16	\$5,806 79	\$362,536 83
Miscellaneous: —							
Monson Hospital, —	\$4 80	\$38 54	\$2,371 54	—	\$2,752 54	\$456 86	\$16,307 78
Foxborough Hospital, —	5 75	758 88	250 56	\$73 92	1,236 82	221 42	4,301 97
School for the Feeble-minded at Waltham, —	50 30	50	865 06	132 75	1,663 53	428 38	16,443 41
Wrentham School, —	—	—	153 95	4 10	182 69	105 46	1,114 23
Totals, hospitals, asylums and miscellaneous, —	\$60 85	\$797 92	\$3,641 11	\$210 77	\$5,865 58	\$1,222 32	\$40,257 39
Totals, hospitals, asylums and miscellaneous, —	\$274 81	\$2,731 21	\$11,422 47	\$1,428 26	\$3,304 74	\$7,029 11	\$40,274 24
Mental wards, State Infirmary, —							
Bridgewater State Hospital, —	\$2 95	\$80 34	\$29 62	\$142 21	\$269 72	\$240 83	\$1,530 05
Totals, —	\$2 95	\$80 34	1,774 59	162 14	2,063 35	775 78	3,582 79
Aggregates, —	\$277 76	\$2,811 55	\$13,226 68	\$1,732 61	\$2,323 07	\$1,016 61	\$5,412 84
						\$8,045 72	\$408,207 08

1 Includes Psychopathic Department.

TABLE 5.—*Expenses for Maintenance and Net Weekly Per Capitas for the Fiscal Year ending Nov. 30, 1913.*

INSTITUTIONS.	Average Number of Patients.	SALARIES, WAGES AND LABOR ON PAY ROLL.				Food. Receipts.
		Gross Expenses.	Receipts.	Net Expenses.	WEEKLY PER CAPITA.	
					1913.	
The insane:—						
State hospitals:—						
Worcester,	1,352	\$130,473 23	—	\$139,473 23	\$1,9838	\$87,242 33
Taunton,	1,117	112,851 96	—	112,851 96	1,9429	66,652 16
Northampton,	894	70,945 35	—	70,945 35	1,4639	49,373 06
Danvers,	1,485	150,289 04	\$54 00	150,285 04	1,9857	69,311 61
Wethersfield,	1,241	144,365 86	—	144,365 86	1,2371	76,279 11
Boston, exclusive of Psychopathic Department,	1,214	134,326 60	—	134,326 60	2,1278	80,229 06
Boston, including Psychopathic Department,	1,309	156,804 99	—	156,804 99	2,7415	99,013 38
Totals and averages,	7,368	\$804,530 43	\$54 00	\$804,476 43	\$2,0997	\$447,871 65
State asylums:—						
Worcester,	1,256	\$116,975 20	—	\$116,975 20	\$1,7910	\$1,8246
Medfield,	1,688	142,866 42	—	142,866 42	1,6276	80,850 74
Gardner Colony,	682	56,910 23	—	56,910 23	1,0605	89,304 80
Totals and averages,	3,626	\$316,760 85	—	\$316,760 85	\$1,6500	\$184,414 58
Totals and averages, hospitals and asylums,	10,994	\$1,121,291 28	\$54 00	\$1,121,297 28	\$1,9613	\$632,286 23
Miscellaneous:—						
Monson Hospital,	911	\$91,103 39	—	\$91,103 39	\$1,9231	\$51,997 85
Foxborough Hospital,	361	42,085 34	—	42,085 34	2,2419	22,524 01
School for the Feeble-minded at Waltham,	1,487	123,151 06	—	123,151 06	1,5827	60,499 46
Wrentham School,	423	38,570 50	—	38,570 50	1,7335	15,269 41
Totals and averages,	3,182	\$294,910 29	—	\$294,910 29	\$1,7823	\$150,290 73
Totals and averages, hospitals, asylums and miscellaneous,	14,176	\$1,416,201 57	\$54 00	\$1,416,147 57	\$1,9211	\$1,7835
Mental wards, State Infirmary,	716	\$48,146 10	—	\$48,146 10	\$1,2931	—
Bridgewater State Hospital,	792	33,187 93	\$3 99	33,183 94	.8058	—
Totals and averages, Aggregates,	1,508	\$81,334 03	\$3 99	\$81,330 04	\$1,0371	\$68,554 64
	15,684	\$1,497,535 60	\$57 99	\$1,497,477 61	\$1,8861	\$551,131 60

* Exclusive of Psychopathic Department.

TABLE 5.—*Expenses for Maintenance, etc.*—Continued.

INSTITUTIONS.	Food—Con.				CLOTHING AND CLOTHING MATERIAL.				WEEKLY PER CAPITA.
	Net Expenses.	1913.	WEEKLY PER CAPITA.	Three Years' Average, 1910-12.	Gross Expenses.	Receipts.	Net Expenses.	1913.	Three Years' Average, 1910-12.
The insane:—									
State hospitals:—									
Worcester, Tauton, Northampton, Danvers, Westborough, Boston, exclusive of Psychopathic Department, Boston, including Psychopathic Department,	\$86,498 05 66,597 96 49,167 20 68,786 62 75,653 90 79,704 56 98,488 88	\$1,2303 1,1466 1,0576 1,0980 1,9547 1,1448 1,2626 1,4469	\$1,1287 1,0796 1,0567 1,0991 8,863 32 7,075 79 8,078 83 9,052 15	\$7,975 94 5,889 25 5,017 56 8,863 32 276 19 396 41 123 00 8,929 15	\$121 91 552 96 276 19 396 41 8,929 15	\$7,854 03 5,336 29 4,741 37 8,538 74 6,679 38 7,955 83 120 00 8,929 15	\$0 1117 .0919 .0935 .1606 .1141 .1577	\$0 1389 .1029 .1020 .1128 .1035 .1266 .1312	
Totals and averages,	\$445,192 61	\$1,1620	\$1,0769 ¹	\$43,374 01	\$1,795 05	\$42,078 96	\$0 1098	\$0 1310 ¹	
State asylums:—									
Worcester, Medfield, Gardner Colony,	\$70,624 76 89,140 40 24,205 75	\$1,0814 1,0156 .6826	\$1,0703 1,0439 .6599	\$14,229 00 19,255 51 6,491 99	\$400 14 138 79 360 63	\$13,828 86 19,116 72 6,131 36	\$0 2117 .2178 .1729	\$0 2016 .1989 .1806	
Totals and averages,	\$183,970 91 \$629,163 52	\$0,9757 \$1,1065	\$0,9814 \$1,0470 ¹	\$39,976 50 \$33,850 51	\$899 56 \$2,694 61	\$39,976 94 \$81,155 90	\$0 2072 \$.1420	\$0 1963 \$.1536 ¹	
Miscellaneous:—									
Monson Hospital, Foxborough Hospital, School for the Feeble-minded at Waltham, Wrentham School,	\$51,700 18 22,419 53 60,420 54 15,264 91	\$1,0914 1,1939 .7814 .6940	\$1,0823 1,1918 .8727 .8424	\$6,611 68 3,555 07 18,957 96 4,488 87	\$69 49 73 23 505 00 20 14	\$6,542 19 3,481 84 18,492 96 4,468 73	\$0 1381 .1855 .2586 .2032	\$0 1074 .1637 .2084 .2652	
Totals and averages, hospitals, asylums and miscellaneous,	\$119,835 16	\$0,9055	\$0,9601	\$33,613 58	\$667 86	\$32,945 72	\$0 1991	\$0 1764	
Mental wards, State Infirmary, Bridgewater State Hospital,	\$778,998 68 \$39,209 90 29,344 74	\$1,0568 \$1,0531 .7125	\$1,0300 ¹ — —	\$117,464 09 — 3,115 22	\$3,362 47 — —	\$114,101 62 \$6,646 66 \$97 89	\$0 1548 \$6,548 77 \$8,115 22	\$0 1585 ¹ — —	
Totals and averages, Aggregates,	\$68,551 64 \$847,553 32	\$0,8742 \$1,0392	— <td>\$14,761 88 \$132,225 97</td> <td>\$897 89 \$3,460 36</td> <td>\$14,663 99 \$128,765 61</td> <td>\$0 1870 \$0 1579</td> <td>— —</td> <td></td>	\$14,761 88 \$132,225 97	\$897 89 \$3,460 36	\$14,663 99 \$128,765 61	\$0 1870 \$0 1579	— —	

1 Exclusive of Psychopathic Department.

TABLE 5.—*Expenses for Maintenance, etc. — Continued.*

INSTITUTIONS.	FURNISHINGS.				
	Gross Expenses.	Receipts.	Net Expenses.	1913.	Three Years' Average, 1910-12.
The insane:—					
State hospitals:—					
Worcester,	\$125 00	\$125 00		\$0.1962	\$0.1762
Taunton,	10,566 59	6 45	10,560 14	.1818	.2994
Northampton,	4,861 28	6 50	4,854 78	.1044	.1071
Danvers,	17,967 07	199 31	17,767 76	.2345	.2335
Westborough,	13,515 02	61 13	13,453 89	.2085	.2086
Boston, exclusive of Psychopathic Department,	12,812 70	11 60	12,801 10	.2835	.0951
Boston, including Psychopathic Department,	18,763 35	11 60	18,691 75	.2746	.1207
Totals and averages,	\$79,528 85	\$409 99	\$79,118 86	\$0.2065	\$0.1027
State asylums:—					
Worcester,	\$14,342 87	—	\$14,342 87	\$0.2196	\$0.1827
Medfield,	15,097 84	\$11 25	15,086 59	.1719	.0938
Gardner Colony,	5,406 96	50	5,406 46	.1524	.1463
Totals and averages,	\$24,847 67	\$411 75	\$24,835 92	\$0.1847	\$0.1327
Totals and averages, hospitals and asylums,	\$114,376 32	\$421 74	\$113,954 78	\$0.1903	\$0.1840
Miscellaneous:—					
Monson Hospital,	\$10,491 49	\$0 50	\$10,490 99	\$0.2214	\$0.1614
Foxborough Hospital,	2,343 50	—	2,343 50	.1249	.1361
School for the Feeble-minded at Waltham,	11,894 79	31 00	11,863 79	.1534	.1477
Wrentham School,	3,322 38	—	3,322 38	.1510	.2410
Totals and averages,	\$28,052 16	\$31 50	\$28,020 66	\$0.1683	\$0.1559
Totals and averages, hospitals, asylums and miscellaneous,	\$142,428 68	\$453 24	\$141,975 44	\$0.1926	\$0.1781
Mental wards, State Infirmary,	\$5,162 02	—	\$5,162 02	\$0.1387	—
Bridgewater State Hospital,	3,388 06	\$29 34	3,358 72	.0816	—
Totals and averages,	\$8,550 08	\$29 24	\$8,520 74	\$0.1087	—
Aggregates,	\$130,978 76	\$482 58	\$150,496 18	\$0.1845	—

1 Exclusive of Psychopathic Department.

TABLE 5.—*Expenses for Maintenance, etc.—Continued.*

INSTITUTIONS.	FURNISHINGS — Con.				HEAT, LIGHT AND POWER.				WEEKLY PER CAPITA—Con.	1913.	Net Expenses.	WEEKLY PER CAPITA.				
	WEEKLY PER CAPITA—Con.		Gross Expenses.		Receipts.		Three Years' Average, 1910-12.									
	Furniture and Upholstery.	Crockery, Glassware, Cutlery, etc.														
The Insane:—																
State hospitals:—																
Worcester,	\$0.0155	\$0.0218	\$27,826.75	\$3.70	\$27,823.05	\$0.3958	\$0.3314									
Taunton,	.0161	.0202	17,397.55	.30	17,397.25	.2956	.0358									
Northampton,	.0014	.0130	14,617.10	70.79	14,546.31	.3129	.2771									
Danvers,	.0050	.0248	30,201.50	30.37	30,171.13	.3688	.3701									
Westborough,	.0128	.0239	28,353.87	—	28,353.87	.4394	.5037									
Boston, exclusive of Psychopathic Department, including Psychopathic Department,	.0050	.0136	27,635.76	19.71	27,636.05	.4378	.3467									
Boston, including Psychopathic Department,	.0272	.0184	35,615.15	19.71	35,615.44	.5232	—									
Totals and averages,	\$0.0136	\$0.0208	\$154,631.92	\$124.87	\$153,907.05	\$0.4017	\$0.3463 ¹									
State asylums:—																
Worcester,	\$0.0071	\$0.0140	\$29,438.38	\$44.70	\$29,438.38	\$0.4507	\$0.4279									
Medfield,	.0147	.0086	33,752.51	44.39	33,707.81	.3840	.3498									
Gardner Colony,	.0075	.0140	14,359.41	—	14,915.02	.4206	.2998									
Totals and averages, hospitals and asylums,	\$0.0167	\$0.0115	\$78,150.30	\$89.09	\$78,061.21	\$0.4140	\$0.3662									
Totals and averages, hospitals and asylums,	\$0.0126	\$0.0178	232,182.22	213.96	231,968.26	\$0.4058	\$0.3546 ¹									
Miscellaneous:—																
Monson Hospital,	\$0.0146	\$0.0187	\$30,280.57	\$4.80	\$30,275.77	\$0.6391	\$0.4404									
Foxborough Hospital,	.0067	.0093	9,050.20	5.75	9,044.45	.4818	.5850									
School for the Feeble-minded at Waltham,	.0276	.0097	16,686.84	50.30	18,636.54	.2410	.2294									
Wrentham School,	.0172	.0095	7,823.11	—	7,823.11	.3557	.4183									
Totals and averages, hospitals, asylums and miscellaneous,	\$0.0201	\$0.0122	\$65,840.72	\$60.55	\$65,779.87	\$0.3976	\$0.3444									
Mental wards, State Infirmary,	\$0.0143	\$0.0165	\$298,022.94	\$274.81	\$297,748.13	\$0.4039	\$0.3522 ¹									
Bridgewater State Hospital,	—	—	16,562.93	—	16,562.93	\$0.4449	—									
Totals and averages, Aggregates,	—	—	10,342.96	\$2.95	10,340.01	.2511	—									
	—	—	\$324,928.83	\$277.76	\$324,651.07	\$0.3431	—									
	—	—	—	—	—	\$0.3981	—									

¹ Exclusive of Psychopathic Department.

TABLE 5.—*Expenses for Maintenance, etc.—Continued.*

INSTITUTIONS.	HEAT, LIGHT AND POWER—Cos.						TOTAL CONSUMPTION WEEKLY PER CAPITA.	Cost.		
	COAL.			BUCKWHEAT AND SCRENNINGS.						
	SOFT.	HARD.	Average Price.	Quantity, Long Tons.	Average Price.	Quantity, Long Tons.				
The insane:—										
State hospitals:—										
Worcester,	5,685	\$4 32	348	\$7 02	—	—	.0858	\$0 3845		
Taunton,	3,409	4 32	188	7 32	—	—	.0619	\$0 3201		
Northampton,	2,791	4 60	193	6 96	—	—	.0642	.2835		
Daupers,	6,033	4 20	396	6 28	—	—	.0850	.2610		
Westborough,	5,383	4 49	614	6 69	—	—	.0929	.2854		
Boston, exclusive of Psychopathic Department,	5,248	4 87	217	7 42	—	—	.0866	.5006		
Boston, including Psychopathic Department,	6,716	4 90	247	7 40	—	—	.1023	.4807		
Totals and averages,	30,017	\$4 48	1,086	\$6 84	—	—	.0835	\$0 3866		
State asylums:—										
Worcester,	1,219	\$3 92	424	\$6 76	6,465	\$3 22	.1241	\$0 4100		
Medfield,	7,209	4 12	459	6 33	—	—	.0873	.3383		
Gardner Colony,	2,142	4 30	232	8 21	—	—	.0669	.2778		
Totals and averages, hospitals and asylums,	10,570	\$4 14	1,115	\$6 88	6,465	\$3 22	.0962	\$0 3840		
Miscellaneous:—										
Monson Hospital,	5,256	\$4 21	854	\$7 54	—	—	.1288	\$0 4235		
Foxborough Hospital,	1,996	4 21	100	6 84	—	—	.1116	.5314		
School for the Feeble-minded at Waltham,	3,116	4 24	642	6 55	—	—	.0486	.2106		
Wenham School,	1,406	4 53	177	7 11	—	—	.0720	.3471		
Totals and averages, hospitals, asylums and miscellaneous,	11,774	\$4 26	1,773	\$7 21	—	—	.0819	\$0 3733		
Mental wards, State Infirmary,	52,361	\$4 36	4,874	\$6 98	6,465	\$3 22	.0864	\$0 3274		
Bridgewater State Hospital,	—	—	—	—	—	—	—	—		
Totals and averages, Aggregates,	—	—	—	—	—	—	—	—		

¹ Exclusive of freight paid previous to December, 1912.

TABLE 5.—*Expenses for Maintenance, etc.—Continued.*

INSTITUTIONS.	REPAIRS AND IMPROVEMENTS.					WEEKLY PER CAPTA.		
	Gross Expenses.	Receipts.	Net Expenses.	1913.	Three Years' Average, 1910-12.	Plumbing, Steam Fitting and Supplies.	Electrical Work and Supplies.	Paints, Oils, Glass, etc.
The insane:—								
State hospitals:—								
Worcester,	\$15,693 70	\$92 83	\$15,600 87	\$0.2219	\$0.2385	\$0.0298	\$0.0131	\$0.0511
Taunton,	11,451 83	110 19	11,041 64	.1901	.1867	.0340	.0078	.0336
Northampton,	11,361 91	80 00	11,281 91	.2427	.2266	.0483	.0254	.0226
Danvers,	32,774 29	424 96	32,449 33	.4276	.4831	.1067	.0298	.0480
Westborough,	13,759 85	18 25	13,741 60	.2129	.1932	.0397	.0365	.0187
Boston, exclusive of Psychopathic Department,	9,398 11	1,023 68	8,374 43	.1327	.2254	.0263	.0144	.0283
Boston, including Psychopathic Department,	12,067 12	1,023 68	11,043 44	.1622	—	.0317	.0181	.0373
Totals and averages,	\$96,808 70	\$1,749 91	\$95,058 79	\$0.2481	\$0.2755 ¹	\$0.0499	\$0.0219	\$0.0365
State asylums:—								
Worcester,	\$9,576 95	\$17 06	\$9,559 86	\$0.1464	\$0.1614	\$0.0371	\$0.0091	\$0.0283
Medfield,	15,145 83	35 64	15,110 19	.1721	.1377	.0593	.0199	.0152
Gardner Colony,	11,940 05	130 65	11,809 40	.3330	.3431	.0448	.0524	.0415
Totals and averages,	\$36,662 83	\$1,883 38	\$36,479 45	\$0.1935	\$0.1834	\$0.0489	\$0.0222	\$0.0247
Totals and averages, hospitals and asylums,	\$132,471 53	\$1,933 29	\$131,535 24	\$0.2301	\$0.2433 ¹	\$0.0496	\$0.0220	\$0.0326
Miscellaneous:—								
Monson Hospital,	\$8,933 62	\$38 54	\$8,895 08	\$0.1878	\$0.2224	\$0.0382	\$0.0272	\$0.0313
Foxborough Hospital,	5,115 39	758 88	4,356 51	.2321	.3387	.0502	.0374	.0466
School for the Feeble-minded at Waltham,	13,785 50	50	13,785 00	.1783	.2004	.0316	.0110	.0366
Wrentham School,	4,314 59	—	4,314 59	.1962	.2849	.0263	.0133	.0367
Totals and averages,	\$32,149 10	\$797 92	\$31,351 18	\$0.1895	\$0.2311	\$0.0344	\$0.0189	\$0.0362
Totals and averages, hospitals, asylums and miscellaneous,	\$165,420 63	\$2,731 21	\$162,889 42	\$0.2210	\$0.2405 ¹	\$0.0462	\$0.0213	\$0.0334
Mental wards, State Infirmary,	\$7,113 28	—	\$7,113 28	\$0.1911	—	—	—	—
Bridgewater State Hospital,	5,571 64	\$80 34	5,491 30	.1333	—	—	—	—
Totals and averages,	\$12,684 92	\$80 34	\$12,604 58	\$0.1607	—	—	—	—
Aggregates,	\$178,305 55	\$2,811 55	\$175,494 00	\$0.2152	—	—	—	—

¹ Excluding Psychopathic Department.

TABLE 5.—*Expenses for Maintenance, etc.*—Continued.

INSTITUTIONS.	FARM, STABLE AND GROUNDS.					WEEKLY PER CAPITA.
	Gross Expenses.	Receipts.	Net Expenses.	1913.	Three Years' Average, 1910-12.	
The insane:—						
State hospitals:—						
Worcester,	\$19,060.27	\$873.86	\$18,186.41	\$0.2387	\$0.2247	\$0.0460
Taunton,	22,779.06	182.94	22,596.12	.3890	.3447	.0180
Northampton,	17,028.45	1,884.30	15,194.15	.3269	.3480	.0223
Davens,	20,758.48	1,079.83	19,678.65	.2601	.2272	.0773
Westborough,	20,914.12	512.33	20,401.79	.3161	.3172	.0228
Boston, exclusive of Psychopathic Department,	12,334.39	654.35	11,780.24	.1866	.2797	.0144
Boston, including Psychopathic Department,	14,025.38	554.35	13,471.03	.1079	—	.0639
Totals and averages,	\$114,565.76	\$5,037.61	\$109,528.15	\$0.2859	\$0.2823 ¹	\$0.0328
State asylums:—						
Worcester,	\$19,382.43	\$1,374.37	\$18,008.06	\$0.2757	\$0.2623	\$0.0625
Medfield,	26,752.10	841.25	25,910.85	.2052	.2883	.0214
Gardner Colony,	14,559.10	328.13	14,030.97	.3956	.4293	.0272
Totals and averages,	\$60,693.63	\$2,743.75	\$57,949.88	\$0.3073	\$0.3058	\$0.0291
Totals and averages, hospitals and asylums,	\$175,259.39	\$7,751.36	\$167,478.03	\$0.2929	\$0.2901 ¹	\$0.0316
Miscellaneous:—						
Monsom Hospital,	\$13,929.28	\$2,371.54	\$11,557.74	\$0.2440	\$0.2466	\$0.0216
Foxborough Hospital,	6,809.96	250.56	6,559.40	.3494	.3762	.0358
School for the Feeble-minded at Waltham,	29,504.26	865.06	28,639.20	.3704	.3617	.0219
Wrentham School,	11,505.90	133.95	11,551.95	.3161	.6539	.0263
Totals and averages, hospitals, asylums and miscellaneous,	\$61,749.40	\$3,641.11	\$58,108.29	\$0.3512	\$0.3487	\$0.0230
Mental wards, State Infirmary,	\$237,008.79	\$11,422.47	\$225,586.32	\$0.3060	\$0.3028 ¹	\$0.0297
Bridgewater State Hospital,	\$3,970.27	\$29.62	\$3,940.65	\$0.1058	—	—
Aggregates,	\$248,432.51	\$1,804.21	\$235,205.83	\$0.1227	—	—
Totals and averages,	\$248,432.51	\$13,226.68	\$235,205.83	\$0.2984	—	—

¹ Exclusive of Psychopathic Department.

TABLE 5.—*Expenses for Maintenance, etc.—Continued.*

INSTITUTIONS.	FARM, STABLE AND GROUNDS — Con.		WEEKLY PER CAPITA				WEEKLY PER CAPITA.				MISCELLANEOUS.					
	— Con.		Cows.		Horses.		Gross Expenses.		Receipts.		Net Expenses.		Three Years' Average, 1910-12.		Freight, Express and Transportation.	
The insane:—																
State hospitals:—																
Worcester,																
Taunton,																
Northampton,																
Danvers,																
Westborough,																
Boston, exclusive of Psychopathic Department,																
Boston, including Psychopathic Department,																
Totals and averages,																
State asylums:—																
Worcester,																
Medfield,																
Gardner Colony,																
Totals and averages, hospitals and asylums,																
Miscellaneous:—																
Monson Hospital,																
Foxborough Hospital,																
School for the Feeble-minded at Waltham,																
Wrentham School,																
Totals and averages, hospitals, asylums and miscellaneous,																
Mental wards, State Infirmary,																
Ridgewater State Hospital,																
Totals and averages, Aggregates,																

1 Exclusive of Psychopathic Department.

Figure 1. Relation for Attainment of Condition

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TABLE 5.—*Expenses for Maintenance, etc. — Concluded.*

INSTITUTIONS.	TOTAL MAINTENANCE EXPENSES — GEN.		MAINTENANCE APPROPRIATION.			Deficiencies.	Balance reverting to State Treasury.
	NET EXPENSES,	NET WEEKLY PER CAPTA,	Receipts of 1912.	In Addition to Such Receipts.	Total.		
The insane:							
State hospitals:							
Worcester,	\$332,026.65	\$4,7227	\$4,2068	\$68,508.64	\$266,741.46	\$335,250.00	\$0.65
Taunton,	270,260.15	4,6531	4,6021	39,322.91	222,977.00	272,300.00	71.45
Northampton,	183,314.33	3,9130	3,8461	51,953.19	134,246.81	186,200.00	49.46
Danvers,	350,419.26	4,6381	4,5427	64,011.75	354,600.00	354,600.00	148.48
Westborough,	319,555.90	4,9119	4,9113	82,774.19	239,575.84	322,350.00	92.25
Boston, exclusive of Psychopathic Department,	299,389.60	4,7492	4,9275	20,299.08	375,200.32	404,500.00	—
Boston, including Psychopathic Department,	401,463.49	5,8071	—	—	—	—	212.61
Totals and averages,	\$1,857,518.48	\$4,8482	\$4,16041	\$32,615,860.66	\$1,639,330.34	\$1,875,200.00	—
State asylums:							
Worcester,	\$298,246.64	\$4,4137	\$4,3395	\$0,144.88	\$284,755.12	\$200,900.00	\$88.60
Medfield,	365,764.32	4,0630	3,7738	13,943.04	313,654.06	357,508.00	10.63
Gardner Colony,	139,723.34	3,9390	3,6675	4,450.25	137,010.75	141,500.00	5.82
Totals and averages,	\$783,714.20	\$4,1666	\$3,9391	\$27,538.17	\$742,459.83	\$789,998.00	\$114.14
Totals and averages, hospitals and asylums,	\$2,641,242.08	\$4,6201	\$4,42981	\$3163,407.83	\$2,391,790.17	\$2,165,108.00	\$689.37
Misellaneous:							
Monson Hospital,	\$225,851.06	\$4,7676	\$4,4539	\$14,497.76	\$220,036.54 ²	\$234,534.30 ²	\$5,443.24
Foxborough Hospital,	101,702.69	6,4178	5,3065	6,3965.99	96,533.01	103,500.00	339.17
School for the Feeble-minded at Waltham,	207,860.51	3,8621	3,8098	17,927.64	285,893.35 ³	303,820.89 ³	3,858.27
Wrentham School,	100,618.27	4,1198	4,8766	635.57	94,594.43	95,230.00	4,323.58
Totals and averages,	\$716,033.63	\$4,3274	\$4,2540	\$10,026.86	\$107,4958.33	\$737,085.10	\$13,064.26
Totals and averages, hospitals, asylums and mischievous, ⁴	\$3,357,295.71	\$4,5544	\$4,3120 ¹	\$4,463,431.60	\$2,908,848.60	\$3,402,283.10	\$14,653.63
Mental wards, State Infirmary,	\$136,972.15	\$4,6789	—	\$3,242.44	\$134,261.75	\$137,504.19 ⁴	\$21.10 ⁴
Bridgewater State Hospital,	103,502.33	2,5132	—	3,236.11	103,098.22	106,333.33 ⁴	1.98 ⁴
Totals and averages, ⁴	\$20,474.38	\$3,0666	\$4,4114	\$6,477.55	\$237,350.07	\$233,807.52 ⁴	\$23.47 ⁴
Aggregate,	\$3,507,770.09	—	—	\$106,912.24	\$3,236,208.47	\$3,646,120.71	\$14,671.10

¹ Exclusive of Psychopathic Department.² Includes deficiency, \$200.30.³ Includes deficiency, \$200.30 for sewage.⁴ Pro rata.

TABLE 6.—Whole Weekly Per Capita Cost of Support of a Patient in the Institutions for the Insane, Feeble-minded, Epileptic and Inebriate for the Fiscal Year ending Nov. 30, 1913.

INSTITUTIONS.	Average Number of Patients, 1913.	Total Real and Personal Property.	Per Capita Valuation.	WEEKLY PER CAPITA COST.			
				Interest 3.33 Per Cent.	Depreciation.	Maintenance, exclusive of Repairs and Improvements.	Gross Cost.
The insane:—							
State hospitals:—							
Worcester,	1,352	\$2,196,371.05	\$1,624.53	\$1.10	\$0.47	\$4.30	\$5.87
Taunton,	1,117	920,877.93	824.42	.56	.31	4.38	5.25
Northampton,	894	1,029,534.09	1,151.61	.78	.50	3.63	4.91
Danvers,	1,435	1,841,004.64	1,265.29	.86	.63	3.82	5.61
Westborough,	1,241	1,009,712.47	813.63	.55	.32	4.63	5.50
Boston, ¹	1,306	2,393,205.95	1,832.85	1.24	.31	5.59	7.14
Totals and averages,	7,368	\$9,396,716.13	\$1,275.33	\$0.87	\$0.47	\$4.39	\$5.73
State asylums:—							
Worcester,	1,256	\$1,493,451.19	\$1,189.65	\$0.81	\$0.30	\$4.15	\$5.26
Medfield,	1,688	1,784,223.00	1,057.72	.72	.31	3.76	4.79
Gardner Colony,	682	656,284.63	962.29	.65	.54	3.45	4.64
Totals and averages,	3,626	\$3,933,958.82	\$1,084.93	\$0.74	\$0.35	\$3.81	\$4.90
Totals and averages, hospitals and asylums,	10,994	\$13,330,674.95	\$1,203.44	\$0.82	\$0.43	\$4.20	\$5.45
Miscellaneous:—							
Monson Hospital,	911	\$829,680.85	\$0.1074	\$0.62	\$0.32	\$4.51	\$5.45
Toxborough Hospital,	361	355,988.17	986.12	.67	.44	5.05	6.16
School for the Feeble-minded at Walham,	1,457	1,068,568.02	718.61	.48	.36	3.49	4.33
Wrentham School,	423	524,282.64	1,239.39	.84	.36	3.76	4.96
Totals and averages,	3,182	\$2,778,499.68	\$873.19	\$0.59	\$0.35	\$3.97	\$4.91
Totals and averages, hospitals, asylums and miscellaneous,	14,176	\$16,109,174.63	\$1,136.36	\$0.77	\$0.41	\$4.15	\$5.33
Mental wards, State Infirmary,	716	\$522,437.14	\$729.73	\$0.49	\$0.32	\$3.37	\$4.18
Bridgewater Hospital,	792	526,780.11	665.14	.45	.16	2.42	3.63
Totals and averages,	1,508	\$1,049,276.25	\$695.81	\$0.47	\$0.23	\$2.83	\$3.53
Aggregates,	15,684	\$17,158,450.88	\$1,096.52	\$0.74	\$0.41	\$4.01	\$5.16

¹ Includes Psychopathic Department.

TABLE 7.—*Receipts and Expenses on Account of Institutions for the Insane, Feeble-minded, Epileptic and Inebriate for the Fiscal Year ending Nov. 30, 1913.*

	EXPENSES.				Total Receipts.	Net Expenses.
	Increasing Value of Plant.	Which counterbalance Depreciation.	Maintenance exclusive of Repairs and Improvements.	Total Expenses.		
State Board of Insanity:— Office, traveling and contingent expenses, salaries and printing annual report, Transportation and deportation of patients, etc., Pathological investigation,	— — —	— — —	\$51,691.57 14,575.90 2,494.56	\$51,691.57 14,575.90 2,494.56	— — \$222.70	\$51,091.57 14,575.90 2,271.86
Totals,	—	—	—	\$68,762.03	\$68,762.03	\$68,539.33
The insane:— State hospitals:— Worcester, Taunton, Northampton, Davens, Westborough, Boston,	\$66,306.11 18,185.12 11,606.55 23,354.15 70,540.13 21,023.83 347,578.89	\$32,849.47 252,846.13 168,839.04 168,839.04 289,290.64 295,466.39 22,019.58	\$300,873.04 315,122.43 203,820.47 359,839.77 331,344.36 751,866.28 382,267.81	\$400,028.62 315,122.43 203,820.47 359,839.77 331,344.36 751,866.28 42,255.17	\$65,130.52 36,676.01 51,065.75 59,069.68 80,143.40 709,611.11	\$334,898.10 278,446.42 152,154.72 300,770.08 251,200.96 42,255.17
Totals,	—	—	—	\$187,829.07	\$1,689,602.05	\$334,940.53
State asylums:— Worcester, Medfield, Gardner Colony,	\$213,643.49 12,563.81 17,336.57	\$19,865.43 27,146.01 19,030.61	\$270,936.71 330,432.36 122,463.57	\$504,445.63 370,142.18 158,820.75	\$10,612.36 14,171.41 2,812.53	\$433,833.27 335,970.77 156,008.20
Totals,	—	—	—	\$243,533.87	\$86,042.05	\$27,596.32
Totals, hospitals and asylums,	\$728,124.68	\$253,871.12	\$2,413,434.60	\$3,315,430.49	\$31,005,812.24	\$31,032,893.64

¹ Includes Psychopathic Department.

TABLE 7.—*Receipts and Expenses, etc.*—Concluded.

	EXPENSES.			Total Receipts.	Net Expenses.
	Increas-ing Value of Plant.	Which counterbalance Depreciation.	Maintenance exclusive of Repairs and Im-provements.		
Miscellaneous: —					
Mental wards, State Infirmary,					
Bridgewater Hospital (insane),					
Monson Hospital (insane),					
Foxborough Hospital (insane),					
Totals, institutions for the insane,					
Family care,					
Totals for the insane,					
Feeble-minded: —					
School for the Feeble-minded at Waltham,					
Wrentham School,					
Totals for the feeble-minded,					
Epileptic: —					
Monson Hospital (sane),					
Hospital Cottages for Children,					
Totals for epileptics,					
Inebriate: —					
Foxborough Hospital,					
Insane hospitals,					
Totals for the inebriates, Aggregates,					

TABLE 8.—*General Statement as to Special Appropriations.*

INSTITUTIONS.	Balances brought forward from Previous Years.	New Appropriations.	Total of Live Appropriations.	EXPENDED DURING FISCAL YEAR ENDING				
				Land.	BUILDINGS FOR PATIENTS.		BUILDINGS FOR NURSES.	
					New and Additions.	Repairs.	New and Additions.	Repairs.
<i>The insane:</i>								
State hospitals:—								
Worcester,	\$65,972 24	\$29,075 00	\$95,047 24	—	\$59,574 53	—	\$1,905 87	—
Taunton,	62,105 88	—	62,105 88	—	40,774 37	—	—	—
Northampton,	12,086 26	10,000 00	22,086 26	—	—	—	—	—
Danvers,	6,057 80	—	6,057 80	—	—	—	—	—
Westborough,	6,262 80	\$7,250 00	63,512 80	\$3,050 00	3,294 59	—	—	—
Boston, ¹	208,312 03	443,000 00	651,312 03	120,848 46	110,063 22	—	9,536 27	—
<i>Totals,</i>	\$360,797 01	\$567,325 00	\$930,122 01	\$123,898 46	\$213,706 71	—	\$11,441 94	—
<i>State asylums:</i>								
State asylums:—								
Worcester,	\$452,399 21	\$208,500 00	\$60,899 21	\$800 00	\$124,386 11	—	\$8,555 86	—
Medfield,	13,756 83	—	13,786 83	—	—	—	12,477 66	—
Gardner Colony,	10,214 33	12,000 00	22,214 33	—	15,906 36	—	—	—
<i>Totals,</i>	\$476,400 37	\$220,500 00	\$669,600 00	\$124,698 46	\$140,292 47	—	\$21,033 52	—
<i>Totals, hospitals and asylums,</i>	\$837,197 38	\$789,825 00	\$1,627,022 38	\$353,999 18	—	—	\$32,475 46	—
<i>Miscellaneous:</i>								
Monson Hospital,	\$10,649 97	\$130,000 00	\$140,649 97	—	\$3,571 79	—	\$4,289 03	—
Foxborough Hospital,	32,155 82	—	32,155 82	—	—	—	—	—
School for the Feeble-minded at Waltham,	124,451 71	292,500 00	416,951 71	—	30,337 65	—	14,562 45	\$1,362 25
Wrentham School,	—	—	—	—	87,428 66	—	—	—
<i>Totals,</i>	\$16,257 50	\$422,500 00	\$589,757 50	\$124,698 46	\$121,238 10	—	\$18,851 48	\$1,362 25
<i>Totals, hospitals, asylums and miscellaneous,</i>	\$1,004,454 88	\$1,212,325 00	\$2,216,779 88	\$475,337 28	—	—	\$51,326 94	\$1,362 25
Mental wards, State Infirmary,	\$16,742 56	—	\$16,742 56	—	\$5,756 46	—	—	—
Bridgewater State Hospital,	—	—	—	—	—	—	—	—
<i>Totals,</i>	\$16,742 56	—	\$16,742 56	—	\$5,756 46	—	—	—
<i>Aggregates,</i>	\$1,021,197 44	\$1,212,325 00	\$2,238,522 44	\$124,698 46	\$481,093 74	—	\$51,326 94	\$1,362 25

¹ Includes Psyehopathic Department.

TABLE 8.—*General Statement as to Special Appropriations*—Continued.

INSTITUTIONS.	DURING FISCAL YEAR ENDING NOV. 30, 1913—Con.			
	For Construction—Con.		TOTAL BUILDINGS.	
	BUILDINGS FOR FARM, STABLE AND GROUNDS.	ALL OTHER BUILDINGS.	New and Additions.	Repairs.
New and Additions.	Repairs.	New and Additions.	Repairs.	
The insane:—				
State hospitals:—				
Worcester, Taunton, Northampton, Danvers, Westborough, Boston, ¹	\$1,200 00	—	\$3,294 90 — — — — —	\$64,775 10 40,774 37 — — — —
Totals,	\$1,200 00	—	94,986 87 \$88,281 77	4,494 59 214,586 36 \$324,630 42 —
State asylums:—				
Worcester, Medfield, Gardner Colony, Wrentham School,	\$1,200 00	—	\$89,216 56 — — —	\$172,158 53 12,477 66 15,906 36 —
Totals, Totals, hospitals and asylums,	\$1,200 00	—	\$89,216 56 \$157,498 33	\$200,542 55 \$525,172 97 —
Miscellaneous:—				
Monson Hospital, Foxborough Hospital, School for the Feeble-minded at Waltham, Wrentham School,	\$3,302 60	—	\$715 16 — 3,365 11	\$11,878 58 — 30,337 65 106,675 78
Totals, Totals, hospitals, asylums and miscellaneous,	\$4,622 16 \$5,822 16	—	\$4,080 27 \$141,578 60	\$148,892 01 \$674,064 98 —
Mental wards, State Infirmary, Bridgewater State Hospital,	—	—	—	\$1,362 25 \$1,362 25 —
Totals, Aggregates,	\$5,822 16	—	\$141,578 60	\$5,756 46 \$679,821 44 \$1,362 25 \$23,232 87 —

¹ Includes Psychopathic Department.

TABLE 8.—*General Statement as to Special Appropriations*—Continued.

INSTITUTIONS.	EXPENDED DURING FISCAL YEAR ENDING NOV. 30, 1913—Con.			
	FOR NURSES.		FOR FURNISHING AND EQUIPPING—Con.	
	First Furnishing and Equipping.	Repairs and Renewals.	FOR FARM, STABLE AND GROUNDS.	FOR ALL OTHER PURPOSES.
The insane:—				
State hospitals:—				
Worcester,	—	—	—	—
Taunton,	—	—	—	—
Northampton,	—	—	—	—
Danvers,	—	—	—	—
Westborough,	—	—	—	—
Boston, ¹	—	—	—	—
Totals,	—	—	—	—
State asylums:—				
Worcester,	—	—	—	—
Medfield,	—	—	—	—
Gardner Colony,	—	—	—	—
Totals,	—	—	—	—
Totals, hospitals and asylums,	\$2,375 67	—	—	—
Miscellaneous:—				
Monson Hospital,	—	—	—	—
Foxborough Hospital,	—	—	—	—
School for the Feeble-minded at Waltham,	—	—	—	—
Wrentham School,	—	—	—	—
Totals,	—	—	—	—
Mental wards, State Infirmary,	—	—	—	—
Bridgewater State Hospital,	—	—	—	—
Totals,	—	—	—	—
Aggregates,	—	—	—	—

¹ Including Psychopathic Department.

TABLE 8.—General Statement as to Special Appropriations—Continued.

INSTITUTIONS.	EXPENDED DURING FISCAL YEAR ENDING NOV. 30, 1912—Cox.					
	For FURNISHING AND EQUIPPING — Con.			For BETTERMENTS,		
	TOTALS.		WATER SUPPLY, EXCLUSIVE OF PLUMBING IN BUILDINGS.		SEWERAGE, EXCLUSIVE OF PLUMBING IN BUILDINGS.	
First Furnishing and Equipping,	Repairs and Renewals,	Adding to Original Value,	Repairs and Renewals,	Adding to Original Value,	Repairs and Renewals,	Adding to Original Value.
The insane:—						
State hospitals:—						
Worcester,	\$1,531 01	—	—	—	—	—
Taunton,	3,410 75	—	—	—	—	—
Northampton,	11,606 55	—	—	—	—	\$6,069 53
Damvers,	—	—	—	—	—	—
Westborough,	7,100 14	—	—	\$1,208 53	—	—
Boston,	—	—	—	\$5,043 03	—	—
Totals,	\$23,648 45	—	—	\$5,043 03	\$1,208 53	—
State asylums:—						
Worcester,	\$1,933 17	—	—	—	—	—
Medfield,	86 15	—	—	—	—	—
Gardner Colony,	619 38	—	—	—	—	—
Totals,	\$2,638 70	—	—	\$4,090 12	—	—
Totals, hospitals and asylums,	\$26,287 15	—	—	\$9,134 05	\$1,208 53	—
Miscellaneous:—						
Monson Hospital,	\$2,273 37	—	—	—	—	—
Foxborough Hospital,	—	—	—	—	—	—
School for the Feeble-minded at Waltham,	1,668 67	—	—	—	—	—
Wrentham School,	11,243 71	—	—	\$1,856 02	—	—
Totals,	\$15,185 75	—	—	\$1,856 02	—	—
Totals, hospitals, asylums and miscellaneous,	\$41,472 90	—	—	\$10,990 07	\$1,208 53	—
Mental wards, State Infirmary,	—	—	—	—	—	—
Bridgewater State Hospital,	—	—	—	—	—	—
Totals, Aggregates,	\$41,472 90	—	—	\$10,990 07	\$1,208 53	\$4,338 44
						\$8,867 87
						\$6,069 53

¹ Including Psychopathic Department.

TABLE 8.—*General Statement as to Special Appropriations — Concluded.*

INSTITUTIONS.	EXPENDED DURING FISCAL YEAR ENDING NOV. 30, 1913 — CON.			Total Expenditures to Date.	Balance at End of Current Fiscal Year.	Reverted Balances.			
	TOTAL EXPENDITURES.		Adding to Original Value.						
	MISCELLANEOUS.	Repairs and Renewals.							
The insane: —									
State hospitals: —									
Worcester, —									
Taunton, —									
Northampton, —									
Danvers, —									
Westborough, —									
Boston, ¹ —									
Totals, —									
State asylums: —									
Worcester, —									
Medfield, —									
Gardner Colony, —									
Totals, —									
Totals, hospitals and asylums, —									
\$32,757 62	\$4,237 73								
\$32,757 62									
\$11,515 79									
\$243,533 87									
\$728,124 68									
\$14,221 76									
\$14,221 76									
\$14,221 76									
\$32,006 32									
\$122,937 39									
\$1,362 25									
\$1,362 25									
\$1,362 25									
\$1,362 25									
\$89,290 15									
\$89,290 15									
\$10,168 19									
\$5,756 46									
\$12,878 04									
\$12,878 04									
\$9,03,046 61									
\$32,857 43	\$4,237 73								
\$32,857 43									
\$9,03,046 61									
\$5,756 46									
\$12,878 04									
\$9,03,046 61									
\$12,878 04									
\$9,03,046 61									
\$5,756 46									
\$915,934 65									
\$915,934 65									
\$84,013 90									
\$2,502,179 21									
\$1,314,452 43									
\$3,145 36									

¹ Includes Psychopathic Department.

TABLE 9.—Comparative Analysis of Pay Roll, by Departments.

INSTITUTIONS.	MEDICAL SERVICE.						WARD SERVICE.		
	Full Roster.	AVERAGE NUMBER OF PERSONS.		AVERAGE MONTHLY COMPENSATION.		AVERAGE WEEKLY PER CAPITA COST, 1910-12.	AVERAGE NUMBER OF PERSONS, MALES, 1910-12.	Full Roster Males.	Full Roster Females.
		In Service, 1913.	Average Three Years, 1910-12.	1913.	Average Three Years, 1910-12.				
The insane:—									
State hospitals:—									
Worcester,	18	15.57	12.18	\$89.74	\$92.13	\$0.2651	110	82.67	75.63
Taunton,	13	12.57	11.81	\$86.94	78.87	.2258	70	70.69	64.20
Northampton,	7	7.57	6.10	\$96.33	105.86	.1682	50	37.74	35.69
Danvers,	21	14.51	13.22	\$85.17	83.00	.1960	1757	50.03	58.03
Westborough,	16	16.30	14.83	\$89.29	86.33	.2706	92	79.44	70.37
Boston, including Psychopathic Department,	38	35.26	10.67	\$80.03	92.00	.4974	24661	74	50.76
Totals and averages,	113	101.78	68.81	\$87.33	\$87.94	\$0.2784	476	422.30	354.68
State asylums:—									
Worcester,	9	8.96	8.93	\$90.55	\$85.35	\$0.1491	69	60.79	59.91
Medfield,	8	6.16	6.21	\$111.23	109.23	.0937	76	70.37	65.15
Gardner Colony,	4	3.35	2.92	\$132.80	131.59	.1506	1371	41.68	35.17
Totals and averages, hospitals and asylums,	21	18.47	18.06	\$105.11	\$101.13	\$0.1236	183	172.84	160.23
Totals and averages, hospitals and asylums,	134	120.25	86.87	\$89.06	\$90.67	\$0.2273	659	595.14	514.91
Miscellaneous:—									
Monson Hospital,	8	8.06	5.57	\$107.58	\$115.23	\$0.2196	47	42.18	41.12
Foxborough Hospital,	5	4.91	5.05	\$127.30	116.26	.3996	22	20.21	21.01
School for the Feeble-minded at Waltham,	7	5.94	5.45	\$166.69	145.60	.1537	24	24.11	23.27
Wrentham School,	3	2.22	1.90	\$194.64	170.88	.2357	3.152	4	2.60
Totals and averages, hospitals, asylums and miscellaneous,	23	21.13	17.97	\$137.92	\$130.54	\$0.2114	97	89.19	87.74
Totals and averages, hospitals, asylums and miscellaneous,	157	141.38	104.84	\$97.21	\$97.50	\$0.2237	756	684.33	602.65

¹ Excluding Psychopathic Department.

TABLE 9.—Comparative Analysis of Pay Roll, by Departments—Continued.

INSTITUTIONS.	WARD SERVICE — Con.					
	AVERAGE NUMBER OF PERSONS, FEMALES.		AVERAGE NUMBER OF PERSONS, TOTALS.		NUMBER OF PATIENTS TO ONE NURSE.	
	In Service, 1913.	Average Three Years, 1910-12.	Full Roster Totals.	In Service, 1913.	Average Three Years, 1910-12.	FEMALES.
The insane:—						
State hospitals:—						
Worcester,	101.32	85.24	230	183.99	160.87	6.79
Taunton,	68.87	68.42	147	139.56	132.62	8.44
Northampton,	38.18	38.65	100	75.92	74.34	12.64
Danvers,	86.57	78.00	179	158.47	136.98	8.73
Westborough,	104.92	100.53	202	184.36	170.90	10.61
Boston, including Psychopathic Department,	147.36	87.65	238	227.22	183.41	5.33
Totals and averages,	547.22	459.44	1,096	969.52	814.12	7.79
State asylums:—						
Worcester,	70.42	65.60	144	131.21	125.51	9.54
Medfield,	122.60	109.39	198	192.97	174.54	10.08
Gardner Colony,	17.27	17.75	72	58.95	52.92	10.43
Totals and averages, hospitals and asylums,	210.29	192.74	414	358.13	352.97	9.97
757.51	632.18	1,510	1,352.65	1,167.09	8.42	9.31
Miscellaneous:—						
Monson Hospital,	47.96	44.75	115	90.14	85.87	8.89
Foxborough Hospital, . . . . .	.98	.53	23	21.19	21.54	17.86
School for the Feeble-minded at Waltham,	152.49	135.35	188	176.60	158.62	5.81
Wrentham School,	31.50	21.77	43	34.19	24.11	18.50
Totals and averages, hospitals, asylums and miscellaneous,	232.93	202.40	369	322.12	290.14	10.36
990.44	854.58	1,879	1,674.77	1,457.23	8.68	9.52

1 Excluding Psychopathic Department.

TABLE 9.—Comparative Analysis of Pay Roll, by Departments—Continued.

INSTITUTIONS.	WARD SERVICE—Con.						GENERAL ADMINISTRATION.	
	AVERAGE MONTHLY COMPENSATION.			AVERAGE WEEKLY PER CAPTA COST.				
	MALES, 1912.	Average Three Years, 1910-12.	FEMALES, 1913.	TOTALS, 1913.	Average Three Years, 1910-12.	Average Three Years, 1910-12.		
The Insane:—								
State hospitals:—								
Worcester,	\$26.41	\$25.77	\$22.96	\$24.51	\$24.28	\$0.7697	\$0.6633	
Taunton,	30.46	29.34	25.04	24.35	26.76	.8011	.8136	
Northampton,	32.49	30.45	28.73	26.85	30.60	.5697	.5598	
Danvers,	29.27	28.84	25.39	24.39	27.15	.6824	.5775	
Westborough,	29.17	28.79	23.95	23.34	26.20	.8982	.8930	
Boston, including Psychopathic Department,	30.39	29.18	26.41	24.93	27.81	1.1141	.9234	
Totals and averages,	\$29.39	\$28.47	\$25.13	\$24.19	\$26.98	\$0.8194	\$0.7276	
State asylums:—								
Worcester,	\$26.80	\$26.55	\$23.84	\$23.78	\$25.21	\$0.6077	\$0.6362	
Medfield,	30.09	30.06	25.42	24.74	27.12	.7156	.6345	
Gardner Colony,	29.50	28.42	21.95	19.87	27.35	.5456	.4820	
Totals and averages,	\$28.81	\$28.39	\$24.61	\$23.97	\$26.50	\$0.6463	\$0.6066	
Totals and averages, hospitals and asylums,	\$29.22	\$28.44	\$24.98	\$24.13	\$26.85	\$0.7631	\$0.7223	
Miscellaneous:—								
Monson Hospital,	\$37.69	\$34.97	\$28.86	\$27.26	\$32.99	\$0.7533	\$0.7507	
Foxborough Hospital,	33.79	31.85	27.02	16.51	33.48	.4535	.4468	
School for the Feeble-minded at Walham,	34.07	31.98	26.32	26.20	27.38	.7504	.7141	
Wrentham School,	39.42	31.60	32.48	25.09	33.02	.6160	.5583	
Totals and averages,	\$35.88	\$33.34	\$27.68	\$26.35	\$29.95	\$0.6997	\$0.6774	
Totals and averages, hospitals, asylums and miscellaneous,	\$30.00	\$29.15	\$25.62	\$24.65	\$27.44	\$0.7483	\$0.6841	

1 Excluding Psychopathic Department.

TABLE 9.—*Comparative Analysis of Pay Roll, by Departments—Continued.*

INSTITUTIONS.	GENERAL ADMINISTRATION — Con.			REPAIRS AND IMPROVEMENTS.						
	AVERAGE MONTHLY COMPENSATION.	AVERAGE WEEKLY PER CAPTA COST.		Full Roster.	In Service, 1913.	AVERAGE NUMBER PERSONS.		AVERAGE MONTHLY COMPENSATION.	AVERAGE WEEKLY PER CAPTA COST.	
		1913.	Average Three Years, 1910-12.			1913.	Average Three Years, 1910-12.			
The insane:—										
State hospitals:—										
Worcester,	\$31.14	\$30.71	\$0.4680	21	15.51	15.47	\$62.17	\$93.95	\$0.2440	
Taunton,	33.88	33.06	.6350	9	6.82	7.79	\$4.18	73.08	.1186	
Northampton,	33.79	34.28	.4151	8	5.95	6.83	\$2.96	91.89	.1297	
Danvers,	42.25	40.73	.5171	21	29.31	31.03	\$1.03	76.41	.1374	
Westborough,	43.71	37.92	.7809	9	6.95	5.71	\$8.37	91.51	.4272	
Boston, including Psychopathic Department,	46.50	47.76	.6329	7	9.35	8.49	\$3.35	72.41	.1083	
Totals and averages,	\$39.12	\$37.06	\$0.6141	75	74.39	75.32	\$89.06	\$85.35	.1462	
State asylums:—										
Worcester,	\$50.27	\$32.39	\$0.5778	50	56.55	17	10.06	9.52	\$55.31	
Medfield,	33.61	31.62	.5312	16	12.86	13.69	77.76	72.29	\$0.1575	
Gardner Colony,	35.15	33.63	.5457	5226	12	7.55	5.80	78.26	80.25	\$0.1367
Totals and averages, hospitals and asylums,	\$38.59	\$32.23	\$0.5500	50	55.53	45	30.46	29.01	\$80.38	
Totals and averages, hospitals and asylums,	\$38.96	\$35.26	\$0.5930	50	53.58	120	104.85	104.33	\$86.54	
Miscellaneous:—										
Monson Hospital,	\$36.67	\$36.55	\$0.5753	50	57.01	8	5.86	4.99	\$90.62	
Foxborough Hospital,	42.32	32.79	1.0056	8009	10	5.98	8.12	44.47	36.99	
School for the Feeble-minded at Waltham,	37.47	36.49	.3203	3235	9	9.05	8.78	127.19	117.98	
Wrentham School,	43.07	39.43	.4595	.5903	3	2.83	2.23	108.65	99.14	
Totals and averages, hospitals, asylums and	\$39.36	\$35.93	\$0.4895	50	47.60	30	23.72	24.12	\$86.09	
miscellaneous,	\$39.04	\$35.39	\$0.5695	50	52.28	150	128.57	128.45	\$88.12	

* Excluding Psychopathic Department.

TABLE 9.—*Comparative Analysis of Pay Roll, by Departments*—Continued.

1 Excluding Psychopathic Department.

TABLE 9.—Comparative Analysis of Pay Roll, by Departments—Concluded.

INSTITUTIONS.	ALL PERSONS EMPLOYED.			AVERAGE MONTHLY COMPENSATION.			AVERAGE WEEKLY PER CAPITA COST.	
	AVERAGE NUMBER OF PERSONS,		NUMBER OF PERSONS TO ONE EMPLOYEE.	AVERAGE THREE YEARS, 1910-12.		AVERAGE THREE YEARS, 1910-12.		
	In Service, 1913.	Average Three Years, 1910-12.		1913.	Average Three Years, 1910-12.			
The insane:—								
State hospitals:—								
Worcester, · · · · ·	414	347.52	311.15	3.89	4.40	\$33.44	\$1.9838	
Taunton, · · · · ·	286	269.33	252.36	4.15	3.99	34.83	\$1.7319	
Northampton, · · · · ·	184	156.84	150.22	5.70	5.83	33.64	\$1.9460	
Danvers, · · · · ·	325	302.08	279.70	4.81	5.15	37.69	\$1.5261	
Westborough, · · · · ·	361	332.07	309.55	3.74	3.63	41.46	\$1.8684	
Boston, including Psychopathic Department, · · · · ·	422	398.91	237.06 ¹	3.25	3.85 ¹	36.23	\$1.8476	
Totals and averages, · · · · ·	1,989	1,806.75	1,540.04 ¹	4.08	4.37 ¹	37.11	\$2.2322	
State asylums:—								
Worcester, · · · · ·	324	261.70	273.87	4.80	4.17	\$37.25	\$1.9838	
Medfield, · · · · ·	385	361.46	350.21	4.67	4.84	32.94	\$1.8248	
Gardner Colony, · · · · ·	141	125.11	111.88	5.45	5.81	37.91	\$1.5273	
Totals and averages, · · · · ·	850	748.27	735.96	4.85	4.74	\$35.28	\$1.4314	
Totals and averages, hospitals and asylums, · · · · ·	2,839	2,555.02	2,276.00 ¹	4.30	4.49 ¹	\$36.57	\$1.7927 ¹	
Miscellaneous:—								
Monson Hospital, · · · · ·	226	188.79	173.67	4.82	4.71	\$40.21	\$1.6800	
Foxborough Hospital, · · · · ·	87	78.64	81.96	4.69	4.31	37.66	\$1.9321	
School for the Feeble-minded at Waltham, · · · · ·	294	281.27	257.30	5.29	5.39	36.49	\$1.8663	
Wrentham School, · · · · ·	73	67.09	50.54	6.30	4.97	47.91	\$2.0214	
Totals and averages, hospitals, asylums and miscellaneous, · · · · ·	680	615.79	563.47	5.17	4.99	\$39.91	\$1.5238	
Totals and averages, hospitals, asylums and miscellaneous, · · · · ·	3,519	3,170.81	2,839.47 ¹	4.47	4.58 ¹	\$37.22	\$1.9361	

¹ Excluding Psychopathic Department.

GENERAL STATISTICS.

TABLE 10.—Statistical Form for State Institutions.—Prepared in Accordance with a Resolution of the National Conference of Charities and Corrections, adopted May 15, 1906.

INSTITUTIONS.	SUPERINTENDENTS.	POPULATION.											
		NUMBER OF INMATES PRESENT AT BEGINNING OF FISCAL YEAR.			NUMBER RECEIVED DURING THE YEAR.			Males.	Females.	Totals.	Males.	Females.	Totals.
		Males.	Females.	Totals.	Males.	Females.	Totals.						
Worcester State Hospital,	Ernest V. Scribner, M.D.,	634	666	1,300	397	331	728	372	326	698			
Taunton State Hospital,	Arthur V. Goss, M.D.,	597	506	1,103	370	316	686	355	291	646			
Northampton State Hospital,	John A. Houston, M.D.,	454	418	872	243	224	467	240	190	430			
Danvers State Hospital,	George M. Kline, M.D.,	610	802	1,412	419	385	804	402	369	771			
Westborough State Hospital,	Harry O. Spaulding, M.D.,	510	727	1,237	324	424	748	301	417	718			
Boston State Hospital, ¹	Henry P. Frost, M.D.,	535	701	1,236	1,102	1,134	2,236	1,049	1,106	2,155			
Worcester State Asylum,	H. Louis Stick, M.D.,	546	604	1,150	166	164	270	34	56	90			
Medfield State Asylum,	Edward French, M.D.,	753	968	1,721	26	109	135	86	73	159			
Gardner State Colony,	Charles T. LaMoure, M.D.,	424	262	686	66	14	80	52	33	85			
Monson State Hospital,	Everett Flood, M.D.,	457	430	887	147	129	276	133	108	241			
Foxborough State Hospital,	Irwin H. Neff, M.D.,	370	—	370	1,322	—	1,322	1,294	—	1,294			
Massachusetts School for the Feeble-minded at Waltham,	Walter E. Fernald, M.D.,	861	580	1,441	222	82	304	180	66	246			
Wrentham State School,	George L. Wallace, M.D.,	188	216	404	29	37	66	27	20	47			
Totals,		6,939	6,880	13,819	4,773	3,349	8,122	4,525	3,055	7,550			

¹ Includes Psychopathic Department.

TABLE 10. — *Statistical Form for State Institutions, &c. — Continued.*

INSTITUTIONS.	NUMBER ^a AT END OF THE FISCAL YEAR.			DAILY ^b AVERAGE ATTENDANCE DURING YEAR.			POPULATION — Con.		
	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.
Worcester State Hospital,	.	.	.	659	671	1,330	659.99	686.76	1,346.75
Taunton State Hospital,	.	.	.	612	531	1,143	605.59	517.70	1,123.29
Northampton State Hospital,	.	.	.	457	452	909	453.94	429.47	883.41
Danvers State Hospital,	.	.	.	627	818	1,445	626.67	834.31	1,450.98
Westborough State Hospital,	.	.	.	533	734	1,267	517.39	720.77	1,238.16
Boston State Hospital, ¹	.	.	.	588	729	1,317	557.88	743.60	1,301.48
Worcester State Asylum,	.	.	.	618	712	1,330	566.42	656.61	1,223.03
Medfield State Asylum,	.	.	.	693	1,004	1,697	718.99	970.32	1,689.31
Gardner State Colony,	.	.	.	438	243	681	431.92	250.44	682.36
Monson State Hospital,	.	.	.	471	451	922	460.35	444.47	904.82
Foxborough State Hospital,	.	.	.	398	—	398	413.94	—	413.94
Massachusetts School for the Feeble-minded at Waltham,	.	.	.	903	596	1,499	890.90	590.90	1,480.00
Wrentham State School,	.	.	.	190	233	423	190.31	238.99	419.30
Totals,	.	.	.	7,187	7,174	14,361	7,093.39	7,063.44	14,156.83
							1,590		1,572
									3,171

¹ Includes Psychopathic Department.

TABLE 10. — *Statistical Form for State Institutions, etc.* — Concluded.

INSTITUTIONS.	CURRENT EXPENSES.					New Buildings, Permanent Improvements, Land, etc.	Grand Totals.
	Salaries and Wages.	Clothing.	Subsistence.	Ordinary Repairs.	Office, Domestic and Outdoor Expenses.		
Worcester State Hospital,	\$139,473 23	\$7,975 94	\$87,242 33	\$15,693 70	\$84,863 95	\$335,249 15	\$401,555 26
Taunton State Hospital,	112,851 96	5,889 25	66,652 16	11,151 83	75,683 32	272,228 52	44,185 12
Northampton State Hospital,	70,945 35	5,017 56	49,373 06	11,361 91	49,452 66	186,150 54	11,606 55
Danvers State Hospital,	150,289 04	8,863 32	69,311 61	32,774 29	93,213 16	354,451 42	—
Westborough State Hospital,	144,365 86	7,075 79	76,279 11	13,759 85	80,777 14	322,257 75	14,914 14
Boston State Hospital, ¹	186,604 99	9,052 15	99,013 38	12,067 12	97,549 75	404,287 39	347,578 89
Worcester State Asylum,	116,375 20	14,229 00	70,850 74	9,576 95	79,179 42	290,811 31	213,633 49
Medfield State Asylum,	142,866 42	19,255 51	89,304 80	15,145 83	91,005 81	357,578 37	12,563 81
Gardner State Colony,	56,919 23	6,491 99	24,259 04	11,940 05	41,883 87	141,494 18	17,326 57
Monson State Hospital,	91,103 39	6,611 68	51,997 85	8,933 62	70,444 52	229,991 06	14,221 76
Foxborough State Hospital,	42,085 34	3,555 07	22,524 01	5,115 39	29,881 02	103,160 83	—
Massachusetts School for the Feeble-minded at Waltham,	123,151 06	18,957 96	60,499 46	13,785 50	83,568 64	299,962 62	32,006 32
Wrentham State School,	38,570 50	4,488 87	15,269 41	4,314 59	28,263 05	90,906 42	122,987 39
Totals,	\$1,416,201 57	\$117,464 09	\$782,576 90	\$165,620 63	\$805,766 31	\$3,387,629 56	\$897,290 15
							\$1,284,919 71

¹ Includes Psychopathic Department.

TABLE 11.—*Classes of Persons under Supervision, their Number and Location, Oct. 1, 1913, and their Increase for the Year.*

	NUMBER.	INCREASE FOR THE YEAR.	NON-RESIDENT.	EPILIP- TIC.	CRIM- INAL.	OTHER CLASSES.			TOTAL INMATES.	
						VOLUNTARY.		NON- MENTAL.		
						MALES.	FEMALES.			
A.—Insane:										
Public institutions:—										
Worcester Hospital,	657	663	1,320	24	25	—	—	17	130	
Taunton Hospital,	609	524	11,133	13	22	35	—	15	1429	
Northampton Hospital,	456	450	2,906	2	34	36	—	12	517	
Danvers Hospital,	626	814	1,440	16	18	34	—	9	918	
Westborough Hospital,	568	720	1,227	23	24	1	3	18	67	
Boston Hospital,	527	700	1,288	43	69	26	10	515	4	
Mental wards, State Infirmary,	194	516	710	133	53	183	—	17	2239	
Worcester Asylum,	618	709	1,327	72	105	177	—	74	2456	
Medfield Asylum,	693	1,004	1,697	603	36	243	—	44	3115	
Gardner Colony,	438	243	681	14	193	53	—	2	1117	
Mosson Hospital,	179	166	345	3	103	73	—	179	66345	
Bridgewater Hospital,	800	21	—	21	—	—	—	22	732	
Foxborough Hospital,	209	—	209	12	—	12	—	—	782	
Totals,	6,574	6,509	13,083	170	209	379	1	3	4,493,19738	
Family care,	12	324	336	13	21	20	—	—	—	
Totals, public,	6,586	6,833	13,419	169	230	399	1	3	4,493,20739	
Private institutions:—										
McLean Hospital,	87	129	216	73	6	13	20	24	44	
Smaller Institutions,	28	103	131	53	8	3	6	19	25	
Totals, private,	115	232	347	123	14	2	26	43	69	
Totals, public and private,	6,701	7,065	13,766	157	244	401	27	46	73	

¹ Includes 2 males, 26 females placed in family care by trustees.² Includes 2 females placed in family care by trustees.³ Decrease.

TABLE 11. — *Classes of Persons under Supervision, etc. — Concluded.*

		NUMBER.		INCREASE FOR THE YEAR.		NON-RESIDENT.		EPILEPTIC.		SCHOOL.		CUSTODIAL.		OTHER CLASSES.		TOTAL INMATES.		
		Males.		Females.		Males.		Females.		Males.		Females.		Males.		Females.		
B. — Feeble-minded: —																		
School for the Feeble-minded at Waltham, Wrentham School.	901	596	1,497	40	16	56	16	30	17	15	32	423	216	639	178	380	858	—
Hospital Cottages for Children, Elm Hill Institution.	190	233	423	2	17	19	—	—	—	—	—	84	62	146	106	171	277	—
Smaller private institutions.	6	16	22	3 ¹	5 ¹	8 ¹	—	—	—	1	5	6	5	11	16	53	31	84
Almshouses and private families, State Infirmary.	43	12	13	1 ¹	1 ¹	2 ¹	3 ¹	9	40	5	2	22	10	32	21	2	23	—
Totsals, feeble-minded,	1,341	1,065	2,406	54	23	77	47	23	70	22	17	534	295	829	613	568	1,181	53
C. — Inebriates: —																		84
Foxborough Hospital,	102	—	102	71 ¹	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Insane hospitals,	—	47	47	—	12	12	—	—	—	—	—	—	—	—	—	—	—	—
Insane asylums,	—	—	3	—	3	3	—	—	—	—	—	—	—	—	—	—	—	—
Private institutions, .	—	4	3	7	1	2	1	—	—	—	—	—	—	—	—	—	—	—
Totsals, inebriates,	106	53	159	72 ¹	17	55 ¹	—	—	—	—	—	—	—	—	—	—	—	—
D. — Epileptics: —																		
Mason Hospital,	471	451	922	14	21	35	—	—	—	—	—	—	—	—	—	—	—	—
Insane hospitals,	83	56	139	3 ¹	2 ¹	5 ¹	—	—	—	—	—	—	—	—	—	—	—	—
Insane asylums,	159	99	258	13 ¹	—	13 ¹	—	—	—	—	—	—	—	—	—	—	—	—
School for the Feeble-minded at Waltham, Hospital Cottages for Children, Family care, Private institutions, .	17	15	32	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—
Totsals, epileptics,	778	658	1,436	—	27	27	—	—	—	—	—	—	—	—	—	—	—	—
Whole number of persons under supervision, Viz.: insane, feeble-minded, epileptic and inebriate, Voluntary mental patients (sane), Temporary care, Other classes,	8,536	8,575	17,111	164	323	487	—	—	—	—	—	—	—	—	—	—	—	—
	8,433	8,407	16,980	152	321	473	—	—	—	—	—	—	—	—	—	—	—	—
	8	26	34	2	5	—	—	—	—	—	—	—	—	—	—	—	—	—
	26	9	35	11	2	13	—	—	—	—	—	—	—	—	—	—	—	—
	19	43	62	1 ¹	3 ¹	4 ¹	—	—	—	—	—	—	—	—	—	—	—	—

Whole number of persons under supervision, Viz.: insane, feeble-minded, epileptic and inebriate, Voluntary mental patients (sane), Temporary care, Other classes,

1 Decrease.

2 Figures taken from reports of overseers of poor, March 31, 1913.

TABLE 12. — *Admissions, Discharges, etc., of the Insane in Institutions and boarded in Private Families for the Year ending Sept. 30, 1913.*

	Worcester Hospital.	Taunton Hospital.	Northampton Hospital.	Danvers Hospital.	Westborough Hospital.	Boston Hospital.	Mental State Wards.	Worcester Insane Asylum.	Medfield Asylum.	Medfield Asylum.	Gardner Colony.
Remaining Sept. 30, 1912,	1,295	1,098	870	1,406	1,219	728	1,150	1,721	686	1,753	424
Men,	633	596	454	610	503	525	207	546	521	604	968
Women,	662	502	416	796	699	694	521	521	—	604	968
Admitted within the year,	702	652	443	790	668	1,088	109	267	135	106	80
Men,	386	350	229	413	312	524	37	161	26	109	66
Women,	346	302	214	377	356	564	72	—	—	109	14
From the community,	568	514	370	622	496	965	66	—	—	—	—
Men,	314	293	194	325	236	467	32	—	—	—	—
Women,	254	251	176	297	260	498	34	—	—	—	—
By commitment,	563	540	358	603	456	703	66	—	—	—	—
Men,	312	188	317	219	322	322	32	—	—	—	—
Women,	251	250	170	286	237	381	34	—	—	—	—
Voluntary,	5	4	12	19	40	255	—	—	—	—	—
Men,	2	3	6	8	17	140	—	—	—	—	—
Women,	3	1	6	11	23	115	—	—	—	—	—
Emergency,	—	—	—	—	—	7	—	—	—	—	—
Men,	—	—	—	—	—	5	—	—	—	—	—
Women,	—	—	—	—	—	2	—	—	—	—	—
By transfer,	19	5	24	34	10	33	—	—	—	124	68
From visit,	13	12	14	28	32	16	1	4	—	1	1
From escape,	7	2	1	8	2	—	—	—	—	2	2
Nominally for discharge,	95	75	53	108	104	95	9	4	9	4	9
Whole number of cases within the year,	1,997	1,750	1,313	2,196	1,870	2,307	837	1,417	1,856	766	—
Dismissed within the year,	677	617	407	756	643	1,019	127	90	159	85	—
Men,	362	227	397	227	481	50	34	—	86	52	—
Women,	315	280	180	359	355	355	56	77	56	73	33

Viz.: Discharged,	18	20
Men,	12	14
Women,	6	6
Recovered,	-	-
Men,	1	1
Women,	-	-
Capable of self-support,	-	-
Improved,	-	-
Not improved,	-	-
Not insane,	-	-
Died,	-	-
Men,	-	-
Women,	-	-
Transferred,	-	-
On visit Sept. 30, 1913,	-	-
On escape Sept. 30, 1913,	-	-
Remaining Sept. 30, 1913,	-	-
Men,	-	-
Women,	-	-
Supported by the State,	-	-
Reimbursing,	-	-
Private,	-	-
Daily average number,	-	-
State,	-	-
Reimbursing,	-	-
Private,	-	-
Persons first admitted to any insane hospital,	-	-
Men,	-	-
Women,	-	-
Recent (insane less than one year),	-	-
Chronic (insane one year or more),	-	-
Unknown,	-	-
Persons admitted from the community,	-	-
Viz.: From cities and large towns,	-	-
From country districts,	-	-
Unknown,	-	-
Whole number of persons within the year,	-	-
Whole number of persons admitted within the year,	-	-
Whole number of persons dismissed within the year,	-	-

TABLE 12. — *Admissions, Discharges, etc., of the Insane in Institutions and boarded in Private Families for the Year ending Sept. 30, 1913 — Concluded.*

	Melrose Hospital	Bridgewater Hospital	Foxborough Hospital	Total Public Institutions.	Family Care.	Total Public.	McLean Hospital	Smaller Institutions.	Total Private.	Total Public and Private.
Remaining Sept. 30, 1912,	352	779	197	12,703	316	13,019	217	128	345	13,364
Men,	176	779	197	6,403	13	6,416	94	33	127	6,543
Women,	176	—	—	6,300	303	6,003	123	95	218	6,821
Admitted within the year,	39	114	46	5,133	109	5,242	172	193	365	5,607
Men,	28	114	46	2,637	4	2,641	79	61	140	2,781
Women,	11	—	—	2,496	105	2,601	93	122	225	2,826
From the community,	27	103	—	3,761	—	3,761	141	173	314	4,075
Men,	20	103	—	1,984	—	1,984	60	56	116	2,100
Women,	7	—	—	1,777	—	1,777	81	117	198	1,975
By commitment,	27	103	—	3,419	—	3,419	74	40	114	3,533
Men,	20	103	—	1,803	—	1,803	29	36	1839	1,839
Women,	7	—	—	1,616	—	1,616	45	33	78	1,694
Voluntary,	—	—	—	335	—	335	67	133	200	535
Men,	—	—	—	176	—	176	31	49	80	256
Women,	—	—	—	159	—	159	36	84	120	279
Emergency,	—	—	—	7	—	7	—	—	—	7
Men,	—	—	—	5	—	5	—	—	—	5
Women,	—	—	—	2	—	2	—	—	—	2
By transfer,	—	4	42	641	104	745	10	16	26	771
From visit,	—	5	1	127	—	127	5	1	6	133
From escape,	—	—	—	27	2	29	—	—	—	29
Nominally for discharge,	6	7	3	577	3	580	16	3	19	599
Whole number of cases within the year,	391	893	243	17,836	425	18,261	389	321	710	18,971
Dismissed within the year,	46	93	34	4,753	89	4,842	173	190	363	5,205
Men,	25	93	34	2,466	5	2,471	86	66	152	2,623
Women,	21	—	—	2,287	84	2,371	87	124	211	2,532

Viz.: Discharged,	142	272
Men,	130	1,868
Women,	9	1,022
Recovered,	9	835
Men,	1	475
Women,	1	24
Capable of self-support,	-	24
Improved,	-	24
Not improved,	-	24
Not insane,	-	24
Died,	-	24
Men,	-	24
Women,	-	24
Transferred,	9	1,857
On visit Sept. 30, 1913,	9	1,868
On escape Sept. 30, 1913,	9	1,868
Remaining Sept. 30, 1913,	9	1,868
Men,	52	52
Women,	4	4
Recovered,	4	4
Men,	24	24
Women,	24	24
Capable of self-support,	-	24
Improved,	-	24
Not improved,	-	24
Not insane,	-	24
Died,	-	24
Men,	-	24
Women,	-	24
Transferred,	3	4
On visit Sept. 30, 1913,	5	4
On escape Sept. 30, 1913,	2	4
Remaining Sept. 30, 1913,	2	4
Men,	345	800
Women,	179	209
Supported by the State,	795	200
Reimbursing,	18	11,539
Private,	5	11,539
Daily average number,	795	200
State,	776	198
Reimbursing,	335	14,118
Private,	20	33,833
Persons first admitted to any insane hospital,	782	203
Men,	11	02
Women,	335	02
Recent (insane less than one year),	776	198
Chronic (insane one year or more),	32	39
Unknown,	10	39
Persons admitted from the community,	764	764
Viz.: From cities and large towns,	90	94
From country districts,	11	63
Unknown,	6	4
Whole number of persons within the year,	7	7
Whole number of persons admitted within the year,	18	18
Whole number of persons dismissed within the year,	7	7
Whole number of persons dismissed within the year,	6	6

¹ Includes 22 self-supporting and 8 living with friends without public aid.

TABLE 13.—*Forms of Mental Diseases in Patients committed, discharged or who died, at Public Institutions for the Insane and McLean Hospital.*

COMMITMENTS.	DISCHARGES, RECOVERIES AND CAPABLE OF SELF-SUPPORT.					
	WORCESTER HOSPITAL.	TAUNTON HOSPITAL.	NORTHAMPTON HOSPITAL.	DANVERS HOSPITAL.	CAPABLE OF SELF-SUPPORT.	CAPABLE OF SELF-SUPPORT.
Total Commitments.						
Other Institutions.						
McLean Hospital.						
Boston Hospital.						
Westborough Hospital.						
Danvers Hospital.						
Northampton Hospital.						
Taunton Hospital.						
Worcester Hospital.						
First admitted to any hospital:—						
A.—Most curable:—						
Acute hallucinosis,	6	—	—	—	—	—
Manic-depressive insanity,	32	21	37	91	59	94
Allied to manic-depressive insanity,	3	—	—	1	—	—
Melancholia, acute,	—	—	—	—	8	8
Confusional insanity, acute,	—	2	1	4	—	—
Hysterical insanity,	2	—	1	5	—	—
Neurasthenia,	—	—	—	—	—	—
Psychoneurosis,	—	—	3	—	2	—
Exhaustion psychosis,	—	3	—	15	5	—
Alcoholic insanity, acute,	44	32	21	36	21	23
Toxic insanity, acute,	3	12	12	4	6	1
Delirium, acute,	2	3	4	—	1	1
Psychosis with somatic disease,	—	—	—	—	1	—
Total A,	92	73	63	145	95	178
					37	16
					699	47
					19	6
					41	46
					23	3
					12	12
					41	46

TABLE 13. — *Forms of Mental Diseases in Patients committed, discharged or who died, at Public Institutions for the Insane and McLean Hospital* — Continued.

DISCHARGES, RECOVERIES AND CAPABLE OF SELF-SUPPORT — Concluded.										TOTAL DISCHARGES.										AGE-EQUATE DISCHARGES and Deaths.		
WESTBOROUGH HOSPITAL.			BOSTON HOSPITAL.			MCLEAN HOSPITAL.			OTHER INSTITUTIONS.			RECOVERED.			IMPROVED.			CAPABLE OF SELF-SUPPORT.			NET IMPROVED.	
First admitted to any hospital: —																						
A. — Most curable: —																						
Acute hallucinosis,	15	18	—	30	—	—	19	11	—	5	—	—	—	—	2	119	56	74	—	28	3	
Manic-depressive insanity,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Allied to manic-depressive insanity,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Melancholia, acute,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Confusional insanity, acute,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Hysterical insanity,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Neurasthenia,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Psychoneurosis,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Exhaustion psychosis,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Alcoholic insanity, acute,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Toxic insanity, acute,	18	2	—	54	1	—	7	—	—	—	—	—	—	—	—	—	10	1	1	1	1	
Delirium, acute,	2	—	—	3	—	—	2	—	—	—	—	—	—	—	—	—	157	21	18	2	198	
Psychosis with somatic disease,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Total A,	37	20	95	3	22	12	17	1	324	85	101	32	542	88	32	52	277	52	3	329	630	

- Recovered from insanity, not epilepsy.

TABLE 13.—*Forms of Mental Diseases in Patients committed, discharged or who died, at Public Institutions for the Insane and McLean Hospital*—Continued.

	COMMITMENTS.	DISCHARGES, RECOVERIES AND CAPABLE OF SELF-SUPPORT.					
		WORCESTER HOSPITAL.	TAUNTON HOSPITAL.	NORTHAMPTON HOSPITAL.	DANVERS HOSPITAL.	CAPABLE OF SELF-SUPPORT.	RECOVERED.
Other admissions:							
A.—Most curable:							
Manic-depressive insanity, Allied to manic-depressive insanity, Confusional insanity, acute, Hysterical insanity, Narstethenia, Psychoneurosis, Exhaustion, psychosis, Alcoholic insanity, acute, Toxic insanity, acute,	28	18	15	45	49	66	41
Total A,	36	27	17	57	53	82	41
Total	322	21	7	8	15	6	4

TABLE 13.—*Forms of Mental Diseases in Patients committed, discharged or who died, at Public Institutions for the Insane and McLean Hospital*—Concluded.

DISCHARGES, RECOVERIES AND CAPABLE OF SELF-SUPPORT —Concluded.		WESTBOROUGH HOSPITAL.		BOSTON HOSPITAL.		MCLEAN HOSPITAL.		OTHER INSTITUTIONS.		TOTAL DISCHARGES.		Died.		Aggregate Discharges and Deaths.	
Recovered.		Recovered.		Recovered.		Recovered.		Capable of Self-support.		Recovered.		Recovered.		Total Dis- charges. charges.	
								Capable of Self- support.						Not Improved.	
														Total Dis- charges. charges.	
														Aggregate Dis- charges and Deaths.	
Other admissions: —															
A. — Most curable: —															
Manic-depressive insanity, —	12	9	25	2	17	8	4	—	—	98	45	45	18	206	32
Allied to manic-depressive insanity, —	—	—	—	—	—	—	—	—	—	—	2	—	—	3	3
Periodic insanity, —	—	—	—	—	—	—	—	—	—	—	1	—	—	1	2
Confusional insanity, acute, —	—	—	—	—	—	—	—	—	—	—	1	—	—	1	1
Hysterical insanity, —	—	—	—	—	—	—	—	—	—	—	1	—	—	1	2
Neurothenia, —	—	—	—	—	—	—	—	—	—	—	1	—	—	1	1
Psychoneurosis, —	—	—	—	—	—	—	—	—	—	—	1	—	—	1	1
Exhaustive psychosis, —	—	—	—	—	—	—	—	—	—	—	1	—	—	1	1
Alcoholic insanity, acute, —	—	2	3	10	—	—	—	—	—	—	25	6	3	34	31
Toxic insanity, acute, —	—	—	—	—	—	—	—	—	—	—	2	1	—	3	3
Total A, —	14	13	35	2	20	8	4	—	—	128	52	52	18	251	38
Total, —	14	13	35	2	20	8	4	—	—	128	52	52	18	251	38

¹ Includes 70 discharged as "not insane."

TABLE 14.—*Probable Causes of Mental Disease in Persons admitted to Public Institutions for the Insane and McLean Hospital who were received for the First Time at Any Hospital.*

	First admitted.	PREDISPOSING CAUSES.		
		Hereditary Tendency.	Neurotic Tendency.	Alcoholic Intemper- ance.
A. — Physical:—				
Adolescence,	21	3	4	—
Alcoholic intemperance,	434	44	17	322
Alcoholic intemperance and other causes.	14	3	—	1
Arteriosclerosis,	123	6	24	2
Arteriosclerosis and other causes, . .	7	—	—	—
Brain tumor,	6	—	—	1
Burn and infection,	1	—	—	—
Carcinoma,	3	1	—	1
Cardio renal disease,	6	1	—	1
Cerebral hemorrhage,	31	2	3	3
Cerebral hemorrhage and other causes.	3	1	1	—
Childbearing,	38	2	4	—
Chorea,	1	—	—	—
Coarse brain lesions,	6	1	1	1
Congenital,	240	75	20	15
Congenital and other causes, . . .	2	—	—	—
Deprivation,	1	1	—	—
Drug habit,	15	2	2	1
Epilepsy,	35	6	2	1
Epilepsy and typhoid fever, . . .	1	—	—	—
Erysipelas,	1	1	—	—
Goitre, exophthalmic,	1	—	1	—
Heredity,	126	113	34	15
Heredity and other causes, . . .	30	—	—	1
Idiopathy,	1	—	—	—
Indigestion,	1	—	—	—
Infectious disease,	14	2	1	—
Involution,	21	4	9	—
La grippe,	1	—	—	—
Lead poisoning,	3	1	—	1
Loss of eyesight,	1	—	1	—
Meningitis,	2	—	—	—
Menopause,	34	9	1	2

TABLE 14.—*Probable Causes of Mental Disease in Persons admitted to Public Institutions for the Insane and McLean Hospital who were received for the First Time at Any Hospital*—Concluded.

	First admitted.	PREDISPOSING CAUSES.		
		Hereditary Tendency.	Neurotic Tendency.	Alcoholic Intemper- ance.
A.—Physical—Con.				
Middle ear disease,	1	—	—	—
Nephritis,	2	—	—	—
Nephritis and arteriosclerosis,	2	—	—	—
Ovariectomy,	1	—	1	—
Pellagra,	3	—	—	—
Puberty,	5	3	—	—
Rachitis,	1	—	—	—
Sarcoma,	1	—	—	—
Senility,	211	19	12	8
Senility and arteriosclerosis,	143	14	8	24
Senility and other causes,	2	—	—	1
Sexual shock,	1	1	—	—
Somatic disease,	31	7	4	—
Syphilis,	271	10	12	25
Trauma,	21	—	3	5
Tuberculosis,	5	2	—	1
Typhoid fever,	1	—	—	—
Uncompensated heart,	1	—	—	—
Uterine trouble,	1	1	—	—
Total physical,	1,928	335	165	432
B.—Mental:—				
Change in environment,	4	—	—	—
Domestic and financial trouble,	7	2	—	1
Fright and other causes,	3	1	—	—
Grief,	10	2	2	—
Induced insanity,	1	—	—	—
Overwork and other causes,	42	14	5	—
Worry and other causes,	68	16	18	3
Shock,	7	1	—	—
Total mental,	142	36	25	4
Totals,	2,070	371	190	436
Unknown,	1,026	82	45	13
Not insane,	12	—	—	—
Totals,	3,108	453	235	449

TABLE 15.—*Duration of Mental Disease and its Treatment in Persons who recovered or died at Public Institutions for the Insane and McLean Hospital.*

PERIOD.	FIRST ADMITTED TO ANY HOSPITAL.				ALL OTHER ADMISSIONS.			
	DURATION BEFORE ADMISSION.		HOSPITAL RESIDENCE.		WHOLE DURATION.		WHOLE KNOWN PERIOD OF HOSPITAL RESIDENCE.	
	Men.	Women.	Men.	Women.	Men.	Women.	Men.	Women.
A.—Recovered: —								
Under 1 month,	•	•	128	68	196	41	13	54
From 1 to 3 months,	•	•	45	33	78	56	151	64
3 to 6 months,	•	•	14	20	34	35	40	75
6 to 12 months,	•	•	11	12	23	31	25	56
1 to 2 years,	•	•	4	9	13	19	13	32
2 to 5 years,	•	•	8	—	9	3	12	18
5 to 10 years,	•	•	3	—	3	1	2	3
10 to 20 years,	•	•	—	—	1	—	1	1
Over 20 years,	•	•	—	—	—	—	—	—
Totals,	•	•	213	142	355	232	152	384
Unknown,	•	•	19	10	29	—	19	10
Totals,	•	•	232	152	384	232	152	384
Average of known cases (in months),	0.46	0.15	0.33	0.33	0.33	0.30	0.32	0.32

TABLE 16.—*Nativity and Parentage of Insane Persons admitted to Public Institutions for the Insane and McLean Hospital, who were received for the First Time at Any Hospital.*

PLACES OF NATIVITY.	1913.						TEN YEARS, 1904-13.					
	MEN.			WOMEN.			TOTALS.			TOTALS.		
	Patients.	Fathers.	Mothers.	Patients.	Fathers.	Mothers.	Patients.	Fathers.	Mothers.	Patients.	Fathers.	Mothers.
Massachusetts,	650	235	255	545	217	210	1,195	452	465	9,607	4,041	4,149
Other New England States,	160	145	134	137	134	142	297	279	276	2,552	2,501	2,495
Other States,	105	70	73	86	67	71	191	137	144	1,516	1,079	1,111
Total native,	915	450	462	768	418	423	1,683	868	885	13,675	7,621	7,755
Other countries:—												
Africa,												
Armenia,												
Asia,												
At sea,												
Australia,												
Austria,												
Azores,												
Banana Islands,												
Barbados Islands,												
Belgium,												
Bermuda,												
Bohemia,												
Bulgaria,												
Canada,												
Cape Verde Islands,												
China,												
Denmark,												
East Indies,												
England,												
Finland,												
France,												
Germany,												
Greece,												
	14	12	12	12	12	12	27	22	25	56	50	575
										15	14	76

TABLE 17.—*Civil Condition of Insane Persons admitted to Public Institutions for the Insane and McLean Hospital who were received for the First Time at Any Hospital.*

CIVIL CONDITION.	1913.			TEN YEARS, 1904-13.		
	Men.	Women.	Totals.	Men.	Women.	Totals.
Unmarried,	767	555	1,322	6,205	4,506	10,711
Married,	688	581	1,269	5,448	4,635	10,083
Widowed,	162	279	441	1,402	2,238	3,640
Divorced,	27	20	47	155	178	333
Unknown,	22	7	29	154	61	215
Totals,	1,666	1,442	3,108	13,364	11,618	24,982

TABLE 18.—*Occupations of Insane Persons admitted to Public Institutions for the Insane and McLean Hospital who were received for the First Time at Any Hospital.*

OCCUPATIONS.	1913.			TEN YEARS, 1904-13.		
	Men.	Women.	Totals.	Men.	Women.	Totals.
Educated or professional, .	56	52	108	488	401	889
Domestic,	32	261	293	189	1,900	2,089
Farmers,	57	—	57	580	—	580
Housekeepers,	—	616	616	—	4,873	4,873
Laborers,	397	—	397	2,860	—	2,860
Mechanical,	373	9	382	2,761	31	2,792
Operatives,	159	90	249	1,227	827	2,054
Traders,	144	14	158	1,322	229	1,551
Miscellaneous,	281	121	402	2,173	648	2,821
Totals,	1,499	1,163	2,662	11,600	8,909	20,509
No occupation,	142	269	411	1,579	2,526	4,105
Unknown,	25	10	35	185	183	368
Totals,	1,666	1,442	3,108	13,364	11,618	24,982

TABLE 19.—*Relative to First Cases of Insanity in Public Institutions and McLean Hospital.*

INSTITUTIONS.	INSANE COMMITMENTS.		FIRST CASES OF INSANITY — PERCENTAGES.					
	All.	First to Any Hospital.	PERCENTAGE OF FIRST CASES OF INSANITY.		PATIENTS.		MOTHERS, NATIVE.	FATHERS, NATIVE.
			1913.	Average Four Years, 1910-13.	MASSACHUSETTS.	1913.	Average Four Years, 1910-13.	Average Four Years, 1910-13.
Worcester Hospital,	·	·	568	461	81.16	81.16	33.12	31.98
Taunton Hospital,	·	·	544	439	80.70	81.02	39.59	41.27
Northampton Hospital,	·	·	370	305	82.43	80.59	36.42	37.60
Danvers Hospital,	·	·	622	494	79.42	80.19	41.26	39.71
Westborough Hospital,	·	·	496	372	75.00	75.93	42.01	43.80
Boston Hospital,	·	·	965	792	82.07	82.14	40.03	38.96
Mental wards, State infirmary,	·	·	66	59	89.39	88.28	18.64	18.94
Bridgewater Hospital,	·	·	103	79	76.70	82.63	32.00	31.44
Other public institutions,	·	·	27	23	85.19	92.89	73.91	77.35
Totals and averages, public,	·	·	3,761	3,024	80.40	80.71	38.62	38.73
McLean Hospital,	·	·	141	84	59.57	67.20	46.43	51.29
Totals and averages, public and McLean,	·	·	3,902	3,108	79.65	80.14	38.84	39.22

TABLE 19. — *Relative to First Cases of Insanity in Public Institutions and McLean Hospital — Continued.*

INSTITUTIONS.	FIRST CASES OF INSANITY — PERCENTAGES — CON.					
	COMMITTED FROM —		AGE.		DURATION Prior to COMMITMENT.	
	CITIES AND TOWNS OVER 10,000, 74 PER CENT, STATE POPULATION.	COUNTRY DIS- TRICTS, 26 PER CENT, OF STATE POPULATION.	60 YEARS OR OVER.	AVERAGE AGE.	1 YEAR OR MORE.	UNDER 1 YEAR.
	1913.	Average Four Years, 1910-13.	1913.	Average Four Years, 1910-13.	1913.	Average Four Years, 1910-13.
Worcester Hospital,	84.38	82.61	15.62	17.39	21.23	19.90
Taunton Hospital,	67.88	67.84	32.12	32.16	25.40	25.10
Northampton Hospital,	81.64	78.49	18.36	21.51	22.30	22.24
Danvers Hospital,	85.83	85.70	14.17	14.30	22.56	19.34
Westborough Hospital,	69.75	71.78	30.25	28.22	17.84	19.00
Boston Hospital,	97.98	98.92	2.02	1.08	18.78	20.90
Mental wards, State Infirmary,	91.53	88.46	8.47	11.54	27.12	20.38
Bridgewater Hospital,	84.81	80.01	15.19	19.99	6.67	6.69
Other public institutions,	78.26	68.91	21.74	31.09	8.70	3.82
Totals and averages, public,	83.84	81.77	16.16	18.23	20.76	19.99
McLean Hospital,	78.57	75.94	21.43	24.06	16.67	15.58
Totals and averages, public and McLean,	83.69	81.55	16.31	18.45	20.65	19.83

TABLE 19.—*Relative to First Cases of Insanity in Public Institutions and McLean Hospital*—Continued.

TABLE 19.—*Relative to First Cases of Insanity in Public Institutions and McLean Hospital*—Continued.

INSTITUTIONS.	FIRST CASES OF INSANITY — PERCENTAGES — Con.					
	CAUSES ASSIGNED BY HOSPITAL PHYSICIANS — Con.			SYPHILIS.		
	SENILITY.	COARSE BRAIN LESIONS.	ALCOHOLIC IN- TEMPERANCE.	ALCOHOLIC IN- TEMPERANCE AND OTHER CAUSES.	TOTAL ALCOHOLIC INTEMPERANCE.	Average Four Years, 1910-13.
	1913.	Average Four Years, 1910-13.	1913.	1913.	1913.	1913.
Worcester Hospital,	13.45	9.95	11.50	9.01	11.71	13.07
Taunton Hospital,	10.48	13.25	4.78	4.39	14.12	16.62
Northampton Hospital,	13.11	14.16	5.90	6.97	13.77	18.09
Danvers Hospital,	9.11	5.77	11.34	9.32	15.18	14.80
Westborough Hospital,	8.87	8.45	5.65	7.85	11.29	10.70
Boston Hospital,	16.04	13.66	16.67	8.74	14.77	14.43
Mental wards, State Infirmary,	—	—	27.12	19.95	11.86	19.69
Bridgewater Hospital,	2.53	3.55	1.27	1.59	41.77	39.85
Other public institutions,	—	—	—	0.38	4.35	1.67
Totals and averages, public,	11.74	10.03	10.52	7.99	14.32	15.33
McLean Hospital,	1.19	0.52	3.57	7.05	1.19	3.11
Totals and averages, public and McLean,	11.45	9.77	10.33	7.98	13.96	14.88

TABLE 19.—*Relative to First Cases of Insanity in Public Institutions and McLean Hospital*—Continued.

INSTITUTIONS.	FIRST CASES OF INSANITY—PERCENTAGES—CONT.			RECOVERIES TO FIRST RECOVERIES.		
	FORAS OF MENTAL DISEASE.			GENERALLY IN-CURABLE.		
	CURABLE.	PERSONS TO FIRST CASES.	GENERALLY INCURABLE.	CURABLE.	A.	GENERALLY IN-CURABLE.
	A.	B.	C.	1913.	1913.	1910-13.
	Average Four Years, 1910-13.	Average Four Years, 1910-13.	Average Four Years, 1910-13.	1913.	1913.	Average Four Years, 1910-13.
Worcester Hospital,	19.96	19.98	44.69	46.44	33.18	32.62
Taunton Hospital,	16.63	16.10	43.05	42.88	33.26	34.42
Northampton Hospital,	20.66	24.43	36.72	32.92	40.33	41.90
Danvers Hospital,	29.35	23.64	22.47	29.81	39.88	36.94
Westborough Hospital,	25.54	27.31	33.33	35.33	29.30	31.03
Boston Hospital,	22.47	26.80	30.81	31.35	32.95	34.42
Mental wards, State Infirmary,	8.47	9.85	37.29	37.17	52.54	52.56
Bridgewater Hospital,	13.92	13.29	62.03	58.52	11.39	21.67
Other public institutions,	—	—	—	—	100.00	100.00
Totals and averages, public,	21.89	21.88	34.95	36.88	34.79	35.77
McLean Hospital,	44.05	53.03	33.33	20.00	10.71	15.54
Totals and averages, public and McLean,	22.49	23.06	34.91	36.21	34.14	35.05

TABLE 19. — *Relative to First Cases of Insanity in Public Institutions and McLean Hospital* — Continued.

INSTITUTIONS.	FIRST CASES OF INSANITY — PERCENTAGES — CON.					
	Forms of Mental Disease — CON.			GENERAL PARALYSIS,		
	MANIC-DEPRESSIVE INSANITY.	ACUTE ALCOHOLIC INSANITY.	CHRONIC ALCOHOLIC INSANITY.	DEMENTIA PRECOX.	1913.	Average Four Years, 1910-13.
	1913.	Average Four Years, 1910-13.	1913.	1913.	1913.	Average Four Years, 1910-13.
Worcester Hospital,	6.94	9.45	9.54	6.48	4.77	6.08
Taunton Hospital,	4.78	5.13	7.29	7.20	3.87	6.09
Northampton Hospital,	12.13	14.87	6.89	8.41	3.93	4.16
Danvers Hospital,	18.42	12.15	7.29	8.88	3.85	3.18
Westborough Hospital,	15.86	18.06	5.65	5.97	3.49	4.02
Boston Hospital,	11.87	13.44	7.32	7.49	6.19	4.40
Mental wards, State Infirmary,	3.39	3.57	3.39	3.64	8.47	14.25
Bridgewater Hospital,	2.53	4.58	1.27	2.84	18.99	13.16
Other public institutions,	—	—	—	—	—	—
Totals and averages, public,	11.18	11.26	7.11	6.96	5.03	5.15
McLean Hospital,	39.29	45.41	—	2.10	—	0.23
Totals and averages, public and McLean,	11.94	12.54	6.92	6.78	4.89	4.97

TABLE 19.—*Relative to First Cases of Insanity in Public Institutions and McLean Hospital — Concluded.*

INSTITUTIONS.	FIRST CASES OF INSANITY — PERCENTAGES — Con.					
	FORMS OF MENTAL DISEASE — Con.			SENILE INSANITY.		
	COARSE BRAIN LESIONS.		EPILEPTIC INSANITY.		IMBECILITY.	
	1913.	Average Four Years, 1910-13.	1913.	Average Four Years, 1910-13.	1913.	Average Four Years, 1910-13.
Worcester Hospital,	.	.	8.46	5.58	0.65	1.31
Taunton Hospital,	.	.	5.24	6.03	3.42	2.78
Northampton Hospital,	.	.	7.54	8.03	0.98	2.20
Danvers Hospital,	.	.	10.73	10.69	2.02	1.98
Westborough Hospital,	.	.	5.91	8.02	1.61	1.45
Boston Hospital,	.	.	9.60	5.12	0.88	1.15
Mental wards, State Infirmary,	.	.	1.69	6.79	3.39	0.85
Bridgewater Hospital,	.	.	1.27	2.00	3.89	2.89
Other public institutions,	.	.	—	—	100.00	100.00
Totals and averages, public,	.	.	7.87	7.06	2.38	3.30
McLean Hospital,	.	.	4.76	7.26	—	0.71
Totals and averages, public and McLean,	.	.	7.79	7.09	2.32	3.16
					4.79	5.22
						11.16
						11.22
						11.44
						11.62
						1.19
						0.76

TABLE 20.—*Relative to Recoveries of the Insane in Public Institutions and McLean Hospital.*

INSTITUTIONS.	PERCENTAGES OF ALL RECOVERIES OF INSANE ON —						FIRST CASES OF INSANITY.	
	COMMITMENTS.		WHOLE NUMBER OF PERSONS.		DAILY AVERAGE NUMBER.		RECOVERIES.	
	1913.	Average Two Years, 1912-13.	1913.	Average Two Years, 1912-13.	1913.	Average Two Years, 1912-13.	1913.	Average Two Years, 1912-13.
Worcester Hospital,	72	12.68	14.06	3.80	3.95	5.38	5.46	50
Taunton Hospital,	38	6.99	7.92	2.28	2.67	3.40	3.94	29
Northampton Hospital,	53	14.32	14.80	4.24	4.18	6.01	5.86	44
Danvers Hospital,	71	11.41	12.34	3.42	3.38	4.89	4.72	51
Westborough Hospital,	63	12.70	17.18	3.59	5.02	5.23	7.22	48
Boston Hospital,	132	15.75	14.56	6.96	6.14	11.93	10.30	116
Mental wards, State Infirmary,	—	—	—	—	—	—	—	—
Bridgewater Hospital,	24	23.30	22.45	2.71	2.49	3.07	2.78	20
Other public institutions,	2	7.41	6.97	0.04	0.06	0.05	0.06	1
Totals and averages, public,	475	12.63	13.44	2.87	2.89	3.68	3.65	359
McLean Hospital,	45	31.91	29.94	12.36	11.65	20.55	19.43	24
Totals and averages, public and McLean,	520	13.33	14.08	3.08	3.09	3.96	3.92	383

TABLE 20.—*Relative to Recoveries of the Insane in Public Institutions and McLean Hospital*—Concluded.

INSTITUTIONS.	FIRST CASES OF INSANITY — Con.											
	CURABLE CASES — Group A.			MANIC-DEPRESSIVE INSANITY.								
	Number.	1913.	Average Four Years, 1910-13.	RECOVERIES.		Number.	1913.	Average Four Years, 1910-13.				
				PERCENTAGE OF FIRST CASES.								
				PERCENTAGE OF SUCH FIRST CASES.								
				1913.	Average Four Years, 1910-13.							
Worcester Hospital,	92	19.96	19.98	47	51.09	55.19	32	6.94	9.45	44	9.54	6.48
Taunton Hospital,	73	16.63	16.10	19	26.03	43.66	21	4.78	5.13	32	7.29	7.20
Northampton Hospital,	63	20.66	24.43	41	65.08	46.77	37	12.13	14.87	21	6.89	8.41
Danvers Hospital,	145	29.35	23.64	46	31.72	32.94	91	18.42	12.15	36	7.29	8.88
Westborough Hospital,	95	25.54	27.81	37	38.95	46.89	59	15.86	18.06	21	5.65	5.97
Boston Hospital,	178	22.47	26.80	95	33.37	40.92	94	11.87	13.44	58	7.32	7.49
Mental wards, State Infirmary,	5	8.47	9.85	—	—	11.81	2	3.39	3.57	2	3.39	3.64
Bridgewater Hospital,	11	13.92	13.29	17	—	—	2	2.53	4.58	1	1.27	2.84
Other public institutions,	—	—	—	—	—	—	—	—	—	—	—	—
Totals and averages, public,	662	21.89	21.88	302	45.62	44.86	338	11.18	11.26	215	7.11	6.96
McLean Hospital,	37	44.05	53.03	22	59.46	47.74	33	39.29	45.41	—	—	2.10
Totals and averages, public and McLean,	699	22.49	23.06	324	46.35	44.98	371	11.94	12.54	215	6.92	6.78

TABLE 21.—*Relative to Deaths of the Insane in Public Institutions and McLean Hospital.*

INSTITUTIONS.	Number of Deaths.	PERCENTAGE OF DEATHS ON—			
		WHOLE NUMBER OF PERSONS.		DISCHARGES AND DEATHS.	
		1913.	Average Five Years, 1909-13.	1913.	Average Five Years, 1909-13.
The insane:—					
State hospitals:—					
Worcester,	183	9.66	9.02	13.67	12.54
Taunton,	162	9.71	9.18	14.51	14.43
Northampton,	116	9.27	7.68	13.15	10.69
Danvers,	204	9.82	9.60	14.06	13.55
Westborough,	122	6.96	7.74	10.12	11.10
Boston,	216	9.89	10.67	16.95	16.79
Totals and averages,	1,003	9.37	9.15	13.80	13.16
State asylums:—					
Worcester,	65	4.60	4.42	5.31	4.87
Medfield,	114	6.17	5.24	6.75	5.75
Gardner Colony,	14	1.85	1.95	2.05	2.19
Totals and averages,	193	4.85	4.39	5.37	4.80
Hospitals and asylums,	1,196	8.36	8.01	11.01	10.31
Miscellaneous:—					
Mental wards, State Infirmary,	71	8.59	9.97	9.37	11.97
Bridgewater Hospital,	32	3.62	2.88	4.00	3.27
Monson Hospital,	27	7.01	6.77	7.67	7.70
Foxborough Hospital,	21	8.75	9.30	10.34	10.47
Totals and averages, public,	1,347	8.14	7.92	10.43	9.93
McLean Hospital,	17	4.67	5.49	7.77	9.37
Totals and averages, public and McLean,	1,364	8.08	7.89	10.38	9.92

TABLE 21.—*Relative to Deaths of the Insane in Public Institutions and McLean Hospital*—Continued.

INSTITUTIONS.	PERCENTAGE OF PERSONS WHO DIED AFFECTION WITH CERTAIN MENTAL DISEASES.							
	Curable Forms (Group A.)	Average Four Years, 1910-13.	Senile Insanity.	Average Four Years, 1910-13.	General Paralysis.	Average Four Years, 1910-13.	Coarse Brain Lesions.	Average Four Years, 1910-13.
<i>The insane:—</i>								
State hospitals:—								
Worcester,	6.56	10.27	33.33	25.84	18.03	25.19	15.30	14.42
Taunton,	7.41	7.85	33.95	29.87	11.11	16.45	10.40	12.75
Northampton,	6.03	7.49	31.52	42.85	12.85	11.21	14.61	16.20
Danvers,	16.18	11.85	13.24	12.10	20.59	22.63	25.49	20.98
Westborough,	14.75	10.18	26.23	25.58	16.39	17.91	15.57	18.09
Boston,	12.96	13.93	15.74	30.94	25.46	22.10	20.83	14.68
Totals and averages,	10.97	10.45	25.62	26.03	18.15	20.08	17.75	15.40
State asylums:—								
Worcester,	3.08	4.54	6.15	10.54	6.15	4.16	4.46	5.19
Medfield,	3.51	4.31	—	—	4.39	2.76	—	2.39
Gardner Colony,	7.14	4.06	—	—	7.14	3.35	—	2.27
Totals and averages,	3.63	4.28	2.07	3.67	5.18	3.37	1.55	3.31
Hospitals and asylums,	9.78	9.48	21.82	22.49	16.05	17.44	15.13	14.32
Miscellaneous:—								
Mental wards, State Infirmary,	4.23	7.40	22.54	21.71	7.04	7.59	—	11.65
Bridgewater Hospital,	3.13	4.42	9.38	10.98	18.75	18.10	9.38	15.64
Monson Hospital,	—	—	—	—	—	—	—	—
Foxborough Hospital,	4.76	6.23	19.05	29.82	14.29	8.40	9.52	11.16
Totals and averages, public,	9.06	8.97	21.08	21.84	15.29	16.24	13.81	13.88
McLean Hospital,	23.53	25.35	11.76	8.72	29.41	18.62	23.53	20.87
Totals and averages, public and McLean,	9.24	9.20	20.97	21.65	15.47	16.27	13.93	13.98

TABLE 21.—*Relative to Deaths of the Insane in Public Institutions and McLean Hospital*—Concluded.

INSTITUTIONS.	PERCENTAGE OF PERSONS WHO DIED AFFECTED WITH CERTAIN PHYSICAL DISEASES.							Average Four Years, 1910-13.
	Tuber-culosis.	Average Four Years, 1910-13.	Pneu-monia.	Average Four Years, 1910-13.	Organic Cardiac Disease.	Average Four Years, 1910-13.	Organic Renal Disease.	
The insane:—								
State hospitals:—								
Worcester,	3.83	4.01	24.04	17.63	8.20	9.11	3.83	0.55
Taunton,	12.96	8.36	20.99	25.42	19.75	13.57	3.09	4.04
Northampton,	9.48	8.55	4.31	3.24	4.31	9.99	—	0.53
Danvers,	5.39	7.31	22.06	21.47	14.71	16.48	7.35	4.70
Westborough,	11.48	8.84	18.03	20.00	8.20	8.73	7.38	5.24
Boston,	8.80	7.52	25.00	26.85	10.65	2.31	4.19	2.31
Totals and averages,	8.28	7.28	20.34	20.20	11.47	11.79	4.09	4.05
State asylums:—								
Worcester,	16.92	19.12	9.23	17.89	32.31	20.84	9.23	7.27
Medfield,	14.91	17.90	4.39	4.05	21.05	22.45	1.75	0.44
Gardner Colony,	42.86	32.02	7.14	3.35	28.57	18.65	—	7.67
Totals and averages,	17.62	19.47	6.22	8.81	25.39	21.46	4.15	3.38
Hospitals and asylums,	9.78	9.20	18.06	18.33	13.71	13.47	4.10	3.94
Miscellaneous:—								
Mental wards, State Infirmary,	22.54	20.44	12.68	5.44	7.04	9.12	8.45	10.01
Bridgewater Hospital,	21.88	13.77	9.38	3.60	18.75	20.48	—	3.13
Monson Hospital,	—	13.85	11.11	15.24	7.41	5.50	3.70	1.66
Foxborough Hospital,	14.29	9.70	23.81	16.44	33.33	39.18	14.29	10.48
Totals and averages, public,	10.62	10.18	17.52	17.07	13.66	13.56	4.38	4.34
McLean Hospital,	—	—	—	10.82	5.88	11.90	17.65	6.58
Totals and averages, public and McLean,	10.48	10.04	17.30	16.99	13.56	13.55	4.55	4.38

MEMBERS OF THE STATE BOARD OF INSANITY.

Date of Original Appointment.	NAME.	Residence.	Term expires.	RETIRED.	
				Date.	Reason.
September, 1898,	<i>George F. Jelly, M.D.,</i>	Boston, .	—	December, 1910	Resigned.
September, 1898,	<i>Herbert B. Howard, M.D.,</i>	Boston, .	—	January, 1902	Resigned.
September, 1898,	<i>Charles R. Codman, .</i>	Barnstable, .	—	September, 1906	Term expired.
September, 1898,	<i>Edward S. Bradford, .</i>	Springfield, .	—	February, 1900	Resigned.
September, 1898,	<i>Francis B. Gardner, .</i>	Brockton, .	—	February, 1902	Resigned.
February, 1900,	<i>Albert L. Harwood, .</i>	Newton Center, .	—	September, 1905	Term expired.
January, 1902,	<i>James B. Ayer, M.D.,</i>	Boston, .	—	September, 1907	Term expired.
December, 1902,	<i>Seward W. Jones, .</i>	Newton Highlands, .	—	December, 1906	Resigned.
September, 1905,	<i>Michael J. O'Meara, M.D.,</i>	Worcester, .	October, 1915	—	
October, 1906,	<i>Henry P. Field, .</i>	Northampton, .	—	December, 1912	Term expired.
January, 1907,	<i>William F. Whitemore, .</i>	Boston, .	September, 1914	—	
September, 1907,	<i>Herbert B. Howard, M.D.,¹</i>	Boston, .	—	March, 1913	Term expired.
December, 1910,	<i>Edward W. Taylor, M.D.,</i>	Boston, .	—	November, 1913	Term expired.
December, 1912,	<i>John Whiting Mason, .</i>	Northampton, .	—	—	
March, 1913,	<i>L. Vernon Briggs, M.D.,</i>	Boston, .	October, 1916	—	
November, 1913,	<i>James M. W. Hall, .</i>	Newton, .	March, 1917	—	
			November, 1918	—	

¹ Reappointed September, 1907.

DIRECTORY OF INSTITUTIONS.

PUBLIC.

WORCESTER STATE HOSPITAL (opened 1833):—

Trustees: T. Hovey Gage, Worcester, chairman; Miss Georgie A. Bacon, Worcester, clerk; Dr. Samuel B. Woodward, Worcester; George F. Blake, Worcester; Lyman A. Ely, Worcester; Thomas Russell, Boston; Mrs. Carrie B. Harrington, Worcester.

Regular meeting, first Tuesday of each month.

Superintendent, Ernest V. Scribner, M.D.

First assistant physician, Ray L. Whitney, M.D.

Assistant physicians, George A. McIver, M.D., Cornelia B. J. Schorer, M.D., Henning V. Hendricks, M.D., Wallace L. Orcutt, M.D., Harold C. Arey, M.D., Roy C. Jackson, M.D.

Pathologist, Samuel T. Orton, M.D.

Pathologist's assistant, Mary E. Morse, M.D.

Treasurer, Ernest V. Scribner, M.D.

Steward, M. H. Center.

Visiting days, Wednesdays and Fridays, from 10 A.M. to 12 M. and 1 P.M. to 4 P.M.

Staff meetings, daily, at 8.30 A.M.

Location, Belmont Street, Worcester, one and one-half miles from Union Station (Boston & Albany, New York, New Haven & Hartford and Boston & Maine).

TAUNTON STATE HOSPITAL (opened 1854):—

Trustees: Henry R. Stedman, M.D., Brookline, chairman; Mrs. Elizabeth C. M. Gifford, East Boston, secretary; Loyed E. Chamberlain, Brockton; James P. Francis, New Bedford; Mrs. Margaret Smith, Taunton; Simeon Borden, Fall River; Edward Lovering, Taunton.

Regular meeting, second Thursday of each month.

Superintendent, Arthur V. Goss, M.D.

Assistant superintendent, Horace G. Ripley, M.D.

TAUNTON STATE HOSPITAL (opened 1854) — *Concluded.*

Assistant physicians, George K. Butterfield, M.D., Raoul G. Provost, M.D., Dora W. Faxon, M.D., John F. O'Brien, M.D.

Junior assistants, Lester F. Norris, M.D., Reginald St. E. Murray, M.D.

Clinical director and pathologist, A. Myerson, M.D.

Treasurer, Frank W. Boynton.

Steward, Otis E. White.

Visiting days, Wednesdays, Sundays and all legal holidays.

Staff meetings, Monday, Tuesday, Thursday, Friday, Saturday, at 8.15 A.M.

Location, Hodges Avenue, Taunton, one mile from railroad station (New York, New Haven & Hartford).

NORTHAMPTON STATE HOSPITAL (opened 1858): —

Trustees: Henry L. Williams, Northampton, chairman; Joseph W. Stevens, Greenfield, secretary; Miss Caroline A. Yale, Northampton; Luke Corcoran, M.D., Springfield; John McQuaid, Pittsfield; Charles S. Shattuck, Hatfield; Mrs. Emily N. Newton, Holyoke.

Regular meeting, first Thursday of each month.

Superintendent, John A. Houston, M.D.

Assistant physicians, Charles H. Dean, M.D., B. Angela Bober, M.D., Charles E. Perry, M.D., Arthur Nelson Ball, M.D., Geraldine Oakley, M.D., Harriet M. Whitney, M.D.

Treasurer and steward, Lewis F. Babbitt.

Visiting days, Tuesdays, Fridays and Saturdays.

Staff meetings, Wednesdays, at 11 A.M.

Location, Prince Street ("Hospital Hill"), Northampton, one and one-half miles from the railroad station, reached by carriage (Massachusetts Central and Connecticut River branches of Boston & Maine).

DANVERS STATE HOSPITAL (opened 1878): —

Post office and railroad station, Hathorne (Boston & Maine).

Trustees: S. Herbert Wilkins, Salem, chairman; Miss Mary W. Nichols, Danvers; Horace H. Atherton, East Saugus; Miss Annie M. Kilham, Beverly; Seward W. Jones, Newton Highlands; Ernest B. Dane, Boston; Samuel Cole, Beverly, secretary.

DANVERS STATE HOSPITAL (opened 1878) — *Concluded.*

Regular meeting, second Friday of each month.

Superintendent, George M. Kline, M.D.

Assistant physicians, John B. Macdonald, M.D., Harlan L. Paine, M.D., Nelson G. Trueman, M.D., Ferd. D. Streeter, M.D., Rose A. Bebb, M.D., Alice A. Steffian, M.D.

Clinical director and pathologist, Earl D. Bond, M.D.

Treasurer, Horace M. Brown.

Steward, Scott Whitcher.

Visiting days, Tuesdays and Saturdays.

Staff meetings, daily, at 8 A.M.

Location, Maple and Newbury streets, Danvers, one-quarter mile from railroad station.

WESTBOROUGH STATE HOSPITAL (opened 1886): —

Trustees: John L. Coffin, M.D., Northborough, chairman; Miss Eliza C. Durfee, Fall River, secretary; William Avery Cary, Medford; George B. Dewson, Cohasset; John M. Merriam, Esq., South Framingham; John H. Pickford, Worcester; Miss Sarah B. Williams, Taunton.

Regular meeting, first Thursday of each month.

Superintendent, Harry O. Spalding, M.D.

Assistant superintendent, M. M. Jordan, M.D.

Assistant physicians, W. A. Jillson, M.D., Alice S. Cutler, M.D., Emma H. Fay, M.D., Ruel A. Pierce, M.D., Harriet Horner, M.D., Mark Mizenea, M.D.

Pathologist, Solomon C. Fuller, M.D.

Treasurer, Mabel J. Goddard.

Steward, Melville L. Stacy.

Visiting days, Tuesdays and Saturdays.

Staff meetings, daily, at 11.30 A.M.

Location, two and one-quarter miles from Westborough station (Boston & Albany); one mile from Talbot station (New York, New Haven & Hartford).

BOSTON STATE HOSPITAL (opened 1839): —

Post office, Dorchester Center; railroad station, Forest Hills (New York, New Haven & Hartford).

Trustees: Walter Channing, M.D., Brookline, chairman; Henry Lefavour, Boston, secretary; Mrs. Guy Lowell, Brookline; Lehman Pickert, Brookline; Mrs. William H. Devine, South Boston; Michael J. Jordan, Boston; Hon. Melvin S. Nash, Boston.

BOSTON STATE HOSPITAL (opened 1839) — *Continued.*

Regular meeting, at the Psychopathic Department, on the second Tuesday of each month.

Visiting days, 2 to 4 p.m. daily.

Superintendent, Henry P. Frost, M.D.

Assistant superintendent, Samuel W. Crittenden, M.D.

Assistant physicians, Mary E. Gill Noble, M.D., Ermy C. Noble, M.D., John I. Wiseman, M.D., William M. Dobson, M.D., Cyril G. Richards, M.D., Guy D. Tibbetts, M.D.

Pathologist, Myrtelle M. Canavan, M.D.

Steward, William E. Elton.

Treasurer, Fred L. Brown.

Location, East Group, Harvard Street, Dorchester, near Blue Hill Avenue; West Group, Walk Hill Street, about one-half mile from Blue Hill Avenue, one and one-half miles from railroad station; Psychopathic Department, 74 Fenwood Road, corner of Brookline Avenue.

Psychopathic Department (opened 1912): —

Post office, 74 Fenwood Road, Boston.

Director, Elmer E. Southard, M.D.

Chief of staff, Herman M. Adler, M.D.

Executive assistant physician, Frankwood E. Williams, M.D.

First assistant physician, Thomas H. Haines, M.D.

Assistant physicians, George E. Eversole, M.D., Charles O. Maisch, M.D.

Internes, Paul G. Weisman, M.D., Harriet M. Gervais, M.D.

First assistant physician, out-patient service, A. Warren Stearns, M.D.

Assistant physicians, out-patient service, Donald Gregg, M.D., Victor V. Anderson, M.D., Walter B. Swift, M.D.

Psychologist, Robert M. Yerkes, Ph.D.

Assistants in psychology, Rose S. Hardwick, A.M., Kate F. Puffer, Ph.D.

Internes in psychology, Lydiard H. Horton, A.M., James W. Bridges, A.M.

Internes, Ward H. Cook, A.M., Benjamin H. Ragle, A.B., Harry C. Solomon, B.S., Wayland H. Morrison, A.B., Ivan R. Burkett, A.M., G. Philip Grabfield, A.B.

Special examiner, Louville E. Emerson, Ph.D.

Voluntary assistant, Winthrop Adams.

Chief of social service department, Mary C. Jarrett, A.B.

Eugenics worker, Anna E. Steffen.

BOSTON STATE HOSPITAL (opened 1839) — *Concluded.*

Historian, Elizabeth Chapman.

Occupational worker, Jane E. White.

Photographer, Arthur W. Carpenter.

WORCESTER STATE ASYLUM (opened 1877): —

Trustees: trustees of Worcester State Hospital.

Superintendent and treasurer, H. Louis Stick, M.D.

Assistant physicians: Arthur E. Pattrall, M.D., B. Henry Mason, M.D., Effie A. Stevenson, M.D., Hiram L. Horsman, M.D., Donald R. Gilfillan, M.D.

Pathologist, Frederick H. Baker, M.D.

Visiting surgeon, Lemuel Woodward, M.D.

Visiting days, every day, except Sunday.

Location, Summer Street, Worcester, five minutes' walk from Union Station (Boston & Albany, Boston & Maine and New York, New Haven & Hartford).

Grafton Colony: —

The Grafton Colony of this institution is situated on the main line of the Boston & Albany Railroad, between Worcester and Westborough, about eight miles from Worcester. This colony is a branch of the main institution, and in no way a separate hospital. Patients are transferred from the asylum to the colony and from the colony to the asylum in the same way as from one ward to another in the main institution. The transfer of a patient does not necessarily mean any change for either better or worse in the mental condition of the individual. Transfers are made either to relieve overcrowding or because it is believed that the one place or the other will be better for the patient. The colony is administered from the main institution in Worcester, and equal medical care and attendance is given in either place. Notice of transfer between the asylum and the colony is sent to relatives and friends of patients for their convenience in visiting. The visiting days are every day in the week, with the exception of Sunday, from 9.30 A.M. to 4 P.M. The colony can be reached by trolley either from the Westborough or North Grafton stations of the Boston & Albany Railroad, or from the Lyman Street crossing of the Boston & Worcester electrics. All correspondence should continue to be addressed, as usual, to the Worcester State Asylum, Box 1178, Worcester, Mass.

MEDFIELD STATE ASYLUM (opened 1896): —

Post office, Harding; railroad station, Medfield Junction
(New York, New Haven & Hartford).

Trustees: Fred H. Williams, Brookline, chairman; Mrs. Sarah Rand, Newton Center, secretary; Mrs. Nellie Palmer, South Framingham; M. Maurice Dimond, Boston; Albert Evans, M.D., Boston; George O. Clark, M.D., Boston; Walter Rapp, Brockton.

Regular meeting, first Thursday following the first Tuesday of each month.

Superintendent, Edward French, M.D.

Assistant physicians, Lewis M. Walker, M.D., E. Mabel Thompson, M.D., George A. Troxell, M.D., Walter Burrier, M.D., Herbert W. Shaw, D.D.S.

Treasurer, Chas. C. Blaney.

Steward, Louis A. Hall.

Visiting days, every day.

Location, Asylum Road, one mile from Medfield Junction railroad station.

GARDNER STATE COLONY (opened 1902): —

Post office, Gardner; railroad station, East Gardner.

Trustees: Edmund A. Whitman, Cambridge, chairman; Mrs. Amie H. Coes, Worcester, secretary; William H. Baker, M.D., Lynn; John G. Blake, M.D., Boston; George N. Harwood, Barre; Mrs. Alice Miller Spring, Fitchburg; Wilbur F. Whitney, Ashburnham.

Regular meeting, first Friday, occurring on or after the fourth day of each month.

Superintendent and treasurer, Chas. T. LaMoure, M.D.

Assistant superintendent, Thomas Littlewood, M.D.

Assistant physicians, Thomas W. Maloney, M.D., Marion E. Kenworthy, M.D.

Visiting days, every day except Sundays and holidays, from 10 A.M. to 4 P.M. (Sundays and holidays by permission).

Location, Chapel Street, two minutes' walk from East Gardner railroad station.

MONSON STATE HOSPITAL (opened 1898): —

Post office and railroad station, Palmer (Boston & Albany).

MONSON STATE HOSPITAL (opened 1898) — *Concluded.*

Trustees: William N. Bullard, M.D., Boston, chairman; Mrs. Mary B. Townsley, Springfield, secretary; Mrs. Mabel W. Stedman, Brookline; Henry P. Jaques, M.D., Lenox; John Bapst Blake, M.D., Boston; Michael I. Shea, M.D., Chicopee Falls; George A. Moore, M.D., Palmer.

Regular meeting, first Thursday of each month.

Superintendent, Everett Flood, M.D.

Assistant physicians, Morgan B. Hodskins, M.D., Ransom A. Greene, M.D., George E. King, M.D., Donald J. MacLean, M.D., Erwin S. Bundy, M.D.

Assistant physician and pathologist, Douglas A. Thom, M.D.

Assistant physician in charge of Children's Colony, Helen Taft Cleaves, M.D.

Field worker, Miss Isabelle V. Kendig.

Treasurer, Miss Sarah E. Spalding.

Steward, Charles F. Simonds.

Visiting days, Tuesdays and Fridays.

Staff meetings, Mondays and Saturdays, at 11.30 A.M.

Location, one mile from railroad station.

FOXBOROUGH STATE HOSPITAL (opened 1893): —

Trustees: Robert A. Woods, Boston, chairman; William H. Prescott, Boston, secretary; Philip R. Allen, East Walpole; Timothy J. Foley, Worcester; Frank L. Locke, Malden; Edwin Mulready, Rockland; W. Rodman Peabody, Cambridge.

Regular meeting, first Wednesday of each month.

Superintendent and treasurer, Irwin H. Neff, M.D.

Senior assistant physician, Frank H. Carlisle, M.D.

Assistant physician, Edward C. Greene, M.D.

Junior assistant physician, Solomon H. Rubin, M.D.

Physician to Out-patient Department, John A. Horgan, M.D., Boston.

Steward, Nelson Crosskill.

Visiting days, every day excepting legal holidays.

Staff meetings, Mondays, Wednesdays and Fridays, at 11 A.M.

Location, Chestnut Street, one mile from Foxborough Station (New York, New Haven & Hartford).

Out-Patient Department, 28 Court Square, Boston.

MENTAL WARDS, STATE INFIRMARY (opened 1866): —

Post office, Tewksbury; railroad stations, Tewksbury (Western Division, Boston & Maine), Tewksbury Junction and Salem Junction (Southern Division, Boston & Maine).

Trustees, John B. Tivnan, Salem, chairman; Mrs. Charles R. Talbot, Brookline, secretary; Leonard Huntress, M.D., Lowell; Mrs. Helen R. Smith, Newton Center; Galen L. Stone, Brookline; Prof. Walter F. Dearborn, Cambridge; Francis W. Anthony, M.D., Haverhill.

Regular meeting, usually during last week of months, alternately at State Infirmary and State Farm.

Superintendent, John H. Nichols, M.D.

Assistant superintendent and physician, George A. Peirce, M.D.

Assistant physicians, Howard F. Holmes, M.D., Alfred J. Roach, M.D., Sherman Perry, M.D., Howard K. Tuttle, M.D., Harry R. Coburn, M.D., Earl C. Willoughby, M.D., George McLeod Waldie, M.D., Thomas V. Uniae, M.D., John C. Lindsay, M.D., M. Elizabeth Newcomb, M.D., Charles W. DeWolf, M.D., Hattie E. Chalmers, M.D.

Dentist, Frederick E. Twitchell, M.D.

Internes, Edward H. Robbins, M.D., Louis Skirball, M.D., Harold Carney, M.D., H. Scott Pattie, M.D., Henry J. Cabeceiras, M.D., Edward J. Flaherty, M.D.

Visiting days, every day except Sundays and holidays, from 10 A.M. to 4 P.M.

Staff meetings, daily, at 8 A.M.

Location, about one-half mile from railroad and from electric cars. Coach from infirmary meets almost every train.

BRIDGEWATER STATE HOSPITAL (opened 1886, 1895): —

Post office, State Farm; railroad station, Titicut (New York, New Haven & Hartford).

Trustees: trustees of State Infirmary and State Farm.

Medical director, Ernest B. Emerson, M.D.

Assistant physicians, Leonard A. Baker, M.D., John H. Weller, M.D., Lonnie O. Farrar, M.D., Clarence B. Kenney, M.D.

Visiting days, every day except Sundays.

Staff meetings, usually daily, at 11 A.M.

Location, one-quarter mile from railroad station.

MASSACHUSETTS SCHOOL FOR THE FEEBLE-MINDED AT WALTHAM (opened 1848):—

Post office and railroad station, Waverley (Boston & Maine). Trustees appointed by the Governor: Francis J. Barnes, M.D., Cambridge; Mrs. Luann L. Brackett, Boston; Thomas W. Davis, Belmont; Edward W. Emerson, M.D., Concord; Thomas N. Carver, Cambridge.

Trustees appointed by the corporation: Frank G. Wheatley, M.D., North Abington, president; Charles Francis Adams, 2d, Concord, vice-president; Charles E. Ware, Fitchburg, secretary; Frederick P. Fish, Brookline; Joseph B. Warner, Boston; Francis H. Dewey, Worcester.

Quarterly meeting, second Thursday of October, January, April and July.

Superintendent and treasurer, Walter E. Fernald, M.D.

Assistant physicians, Frederic J. Russell, M.D., Anna M. Wallace, M.D., Edith Woodill, M.D., Jonathan H. Ranney, M.D., William H. Lane, M.D.

Visiting days, Wednesday, Thursday and Saturday afternoons.

Staff meetings, daily, at 9 A.M.

Location, near Clematis Brook station (Fitchburg Division, Boston & Maine); about one mile from Waverley station (Fitchburg Division and Southern Division, Boston & Maine).

WRENTHAM STATE SCHOOL (opened 1907):—

Post office and railroad station, Wrentham.

Trustees: Albert L. Harwood, Newton, chairman; Ellerton James, Milton, secretary; Patrick J. Lynch, Beverly; George W. Gay, M.D., Newton; Susanna W. Berry, Nahant; Mrs. Mary Stewart Scott, Brookline; Herbert Parsons, Greenfield.

Regular meeting, second Thursday of each month.

Superintendent and treasurer, George L. Wallace, M.D.

Assistant physician, Franklin H. Perkins, M.D.

Visiting days, every day. Permits will be required for visiting on Sundays and holidays.

Location, Emerald Street, Wrentham, one mile from railroad station (New York, New Haven & Hartford).

THE HOSPITAL COTTAGES FOR CHILDREN, BALDWINVILLE (opened 1882):—

President, Herbert S. Morley, Baldwinville; clerk, Robert N. Wallis, Fitchburg.

Trustees appointed by the Governor: George B. Dewson, Cohasset; Jenness K. Dexter, Springfield; Mrs. William W. Doherty, Boston; Arthur H. Lowe, Fitchburg; Herbert S. Morley, Baldwinville.

Trustees appointed by the corporation: John M. Bemis, M.D., Worcester; Mrs. James B. Case, Boston; Mrs. Edward L. Greene, Lancaster; Mrs. George Heywood, Gardner; Rev. J. S. Lemon, Gardner; Mrs. Winslow S. Lincoln, Worcester; Mrs. Geo. T. Plunkett, Hinsdale; Frederick W. Russell, M.D., Winchendon; Frederick P. Stone, Otter River; Frederic A. Turner, Jr., Boston; Gilman Waite, Baldwinville; Robert N. Wallis, Fitchburg; Mrs. Sarah E. Whitin, Whitinsville; Miss Edith H. Sears, Boston; Mrs. Arthur Smith, Leicester.

Quarterly meeting, third Wednesday of January, April, July and October.

Superintendent, Hartstein W. Page, M.D.

Assistant physicians, Mildred A. Libby, M.D., L. Maude Warren, M.D.

Treasurer, George L. Clark.

Visiting days, every day except Sundays.

Location, Hospital Street, one mile from railroad station (Ware River Branch, Boston & Albany, and Boston & Maine).

PRIVATE.**MCLEAN HOSPITAL (opened 1818):—**

Department of Massachusetts General Hospital Corporation: post office and railroad station, Waverley (Boston & Maine).

President, Henry P. Walcott, M.D., Boston; treasurer, C. H. W. Foster, Needham; secretary, John A. Blanchard, Boston.

Trustees appointed by the Governor: Henry S. Hunnewell, Wellesley; David P. Kimball, Boston; Charles P. Greenough, Boston; Joseph H. O'Neil, Boston.

MCLEAN HOSPITAL (opened 1818) — *Concluded.*

Trustees appointed by the corporation: Henry P. Walcott, M.D., Boston, chairman; Francis H. Appleton, Boston; Nathaniel T. Kidder, Boston; C. H. W. Foster, Needham; John Lowell, Boston; George Wigglesworth, Boston; Moses Williams, Boston; Francis L. Higginson, Boston.

Regular meeting, usually at New England Trust Company of Boston, on Friday, at intervals of two weeks, beginning sixteen days after the first Wednesday in February.

Superintendent, George T. Tuttle, M.D.

First assistant physician, Frederick H. Packard, M.D.

Second assistant physician, Theodore A. Hoch, M.D.

Assistant physician and pathologist, E. Stanley Abbott, M.D.

Assistant in pathological chemistry, Charles C. Erdman, A.B.

Assistant in pathological psychology, F. Lyman Wells, Ph.D.

Junior assistant physicians, Clarence M. Kelley, M.D., Clifford G. Rounsefell, M.D., William F. Dolan, M.D.

Visiting days, week days.

Staff meetings, regularly, Tuesdays, at 8.30 A.M.; irregularly on other days, at the same hour.

Location, Pleasant Street, one-third mile from railroad station.

BOURNEWOOD, Henry R. Stedman, M.D., South Street, Brookline. Railroad station, Bellevue (Dedham Division, New York, New Haven & Hartford). Fifteen minutes' walk. Carriage by previous arrangement.

CHANNING SANITARIUM, Walter Channing, M.D., 701 Chestnut Hill Avenue, Brookline. Railroad station, Reservoir (Boston & Albany), carriage. Or Chestnut Hill street car to Chestnut Hill Avenue.

PINE TERRACE, W. F. Robie, M.D., Baldwinville (Fitchburg Division, Boston & Maine). Three minutes' walk from station.

HERBERT HALL HOSPITAL, John Merrick Bemis, M.D., Salisbury Street, Worcester, Salisbury Street electric car from City Hall Square.

NEWTON SANATORIUM, N. Emmons Paine, M.D., West Newton.
Carriage. Or Newton Boulevard street car to Washington Street.

WELLESLEY NERVINE, Edward H. Wiswall, M.D., Washington Street, Wellesley.

LOCUST GROVE SANITARIUM, Miss Alice R. Cooke, Sandwich;
medical director, George E. White, M.D. Carriage.

FRAMINGHAM NERVINE, Ellen L. Keith, M.D., Winter Street,
Framingham.

SHERWOOD, J. F. Edgerly, M.D., Lincoln.

HIGHLAND HALL, Samuel L. Eaton, M.D., 340 Lake Avenue,
Newton Highlands.

DR. REEVES' NERVINE, Harriet E. Reeves, M.D., 283 Vinton Street, Melrose Highlands.

PRIVATE HOSPITAL, George B. Coon, M.D., East Walpole (Wrentham Branch, New York, New Haven & Hartford, or Norwood Central trains and electrics).

WHEELER SANITARIUM, Mrs. Maria H. Paul, 32 Copeland Street, Roxbury. Elevated to Dudley Street; Warren Street car.

ARLINGTON HEALTH RESORT, Arthur H. Ring, M.D., Arlington Heights. Carriage.

PRIVATE HOSPITAL, Edward B. Lane, M.D., Wellesley. Address, 419 Boylston Street, Boston.

ELM HILL PRIVATE SCHOOL AND HOME FOR THE FEEBLE-MINDED, George A. Brown, M.D., Barre (Southern Division, Boston & Maine).

PRIVATE HOSPITAL, H. N. Archibald, M.D., Post office, Cheshire (Boston & Albany to Pittsfield or North Adams). Electrics to Cheshire.

PRIVATE HOSPITAL, Henry C. Baldwin, M.D., Wareham (Old Colony Division, New York, New Haven & Hartford). Carriage.

NEWTON NERVINE, Edward Mellus, M.D., West Newton. Carriage. Or Newton Boulevard street car to Washington Street.

GLEN SIDE, Mabel D. Ordway, M.D., 6 Parley Vale, Jamaica Plain.

CONECROFT, Robert T. Edes, M.D., 340 Summer Avenue, Reading (Portland Division, Boston & Maine). Carriage.

TERRACE HOME SCHOOL, Miss F. J. Herrick, Amherst (Central Massachusetts Branch, Boston & Maine). Carriage.

FISK HOSPITAL, 106 Sewall Avenue, Brookline. General manager, Chas. D. B. Fisk.

KNOLLWOOD, Earle E. Bessey, M.D., corner Beacon Street and Waban Avenue, Waban (Boston & Albany).

PRIVATE HOSPITAL, Sara E. Stevens, M.D., 31 Linnet Street, West Roxbury (New York, New Haven & Hartford).

VINEYARD HAVEN SANITARIUM, Samuel T. Davis, M.D., Vineyard Haven, Martha's Vineyard, Mass.

BELLEVUE SANITARIUM, Mary W. L. Johnson, M.D., 45 Wolcott Road, Brookline.

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